



3 1761 11708694 2

CA1
MU 1
-69S12

GOVT



Digitized by the Internet Archive
in 2023 with funding from
University of Toronto

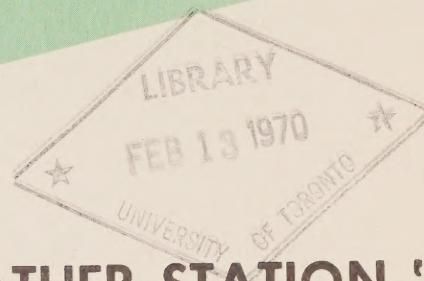
<https://archive.org/details/31761117086942>

CA1
MU1
-69S12

2
Government
Publications



DEPARTMENT OF ENERGY, MINES AND RESOURCES
Ottawa



OCEAN WEATHER STATION 'P'
NORTH PACIFIC OCEAN

May 17 to August 15, 1968

No. 12

1969 Data Record Series

Canadian Oceanographic Data Centre

Programmed by the
Canadian Committee on Oceanography

1969

© Crown Copyrights reserved

Requests for copies should be sent to:

*The Canadian Oceanographic Data Centre, Dept. of Energy, Mines and Resources, 615 Booth Street,
Ottawa.*

Catalogue No. M58-1/1969-12

The Queen's Printer
Ottawa, Canada

1969

OCEAN WEATHER STATION 'P' NORTH PACIFIC OCEAN

May 17 to August 15, 1968

CODC References: 02-68-005

02-68-007

No. 12

1969 Data Record Series

**DEPARTMENT OF ENERGY, MINES AND RESOURCES
Canadian Oceanographic Data Centre
615 Booth St., Ottawa, Canada**

Programmed by the Canadian Committee on Oceanography

DEPARTMENT OF ENERGY, MINES AND RESOURCES
and
FISHERIES RESEARCH BOARD OF CANADA

Ocean Weather Station "P" North Pacific Ocean

Ships:	CCGS "Vancouver"	CCGS "Quadra"
Local cruise designations:	P-68-2	Patrol No. 4
CODC cruise reference nos:	02-68-005	02-68-007
Cruise periods:	May 17-July 4, 1968	June 28-Aug. 15, 1968
Scientist-in-charge:	Dr. C.A. Collins	
Observers:	D.A. Healey C. De Jong	Ship's crew

MARINE SCIENCES BRANCH
and
PACIFIC OCEANOGRAPHIC GROUP
Nanaimo, B.C.

SECTION I

Description of data collection procedures



Figure 1.

The Canadian Weathership CCGS "Vancouver"

Photo by
Canadian Hydrographic Service
Victoria, B.C.



Figure 2.

The Canadian Weathership CCGS "Quadra"

Photo by
Canadian Hydrographic Service
Victoria, B.C.

PACIFIC OCEAN

CHART SHOWING LINE "P" STATION POSITIONS

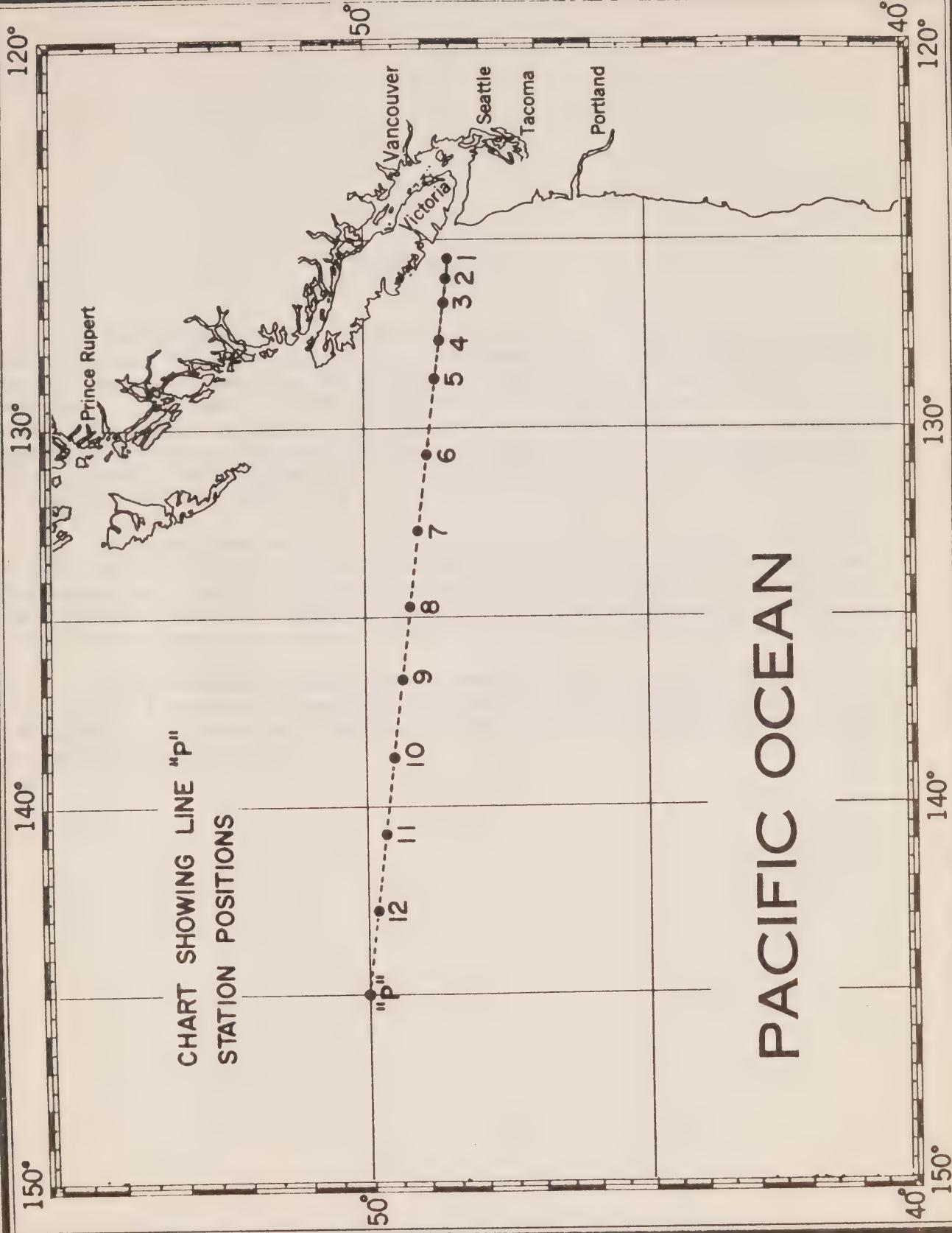


Figure 3.

INTRODUCTION

Canadian operation of Ocean Weather Station P (latitude 50°00'N, longitude 145°00'W) was inaugurated in December 1950. The Station is manned by two vessels operated by the Marine Services Branch of the Department of Transport. They are the CCGS "Vancouver" and the CCGS "Quadra" (Fig.1 and 2). Each ship remains on Station for a period of 6 weeks, and is then relieved by the alternate ship, thus maintaining a continuous watch. The chief purpose of the Station is to operate as a meteorological station for surface and upper-air observations, and as an air-sea rescue station.

The CCGS "Vancouver" is completely equipped with deck and laboratory facilities required to make bathythermograph and oceanographic observations. Oceanographers from the Pacific Oceanographic Group accompany the ship on each patrol. The CCGS "Quadra" is equipped with bathythermograph equipment only. The BT observations on both ships are made by members of the crew.

Bathythermograph observations have been made at Station P since July 1952. A program of oceanographic observations was commenced in August 1956, and it has been increased and altered to suit the requirements for new and additional information.

CRUISE LOG, CCGS "VANCOUVER", SURVEY P-68-2

May 17 departed from Esquimalt, B.C.; 12 oceanographic stations were observed en route to Station P.

May 20 rendezvous with CCGS "Quadra"

May 21 regular observations began, including one 4200 m cast and one STD cast per week and regular biological observations.

June 30 relieved by CCGS "Quadra" and proceeded on the return journey; 6 oceanographic stations were observed on Line P (Fig. 3) and 318 BT observations were made by the ship's crew during the patrol.

July 4 docked at Esquimalt base.

OBSERVATIONAL PROCEDURES

During survey P-68-2, water samples and temperatures were obtained at depth with Nansen water sample bottles equipped with either Richter and Wiese or Yoshino reversing thermometers. Surface samples (0 m) were obtained in a one-gallon rubber bucket. The surface temperature was measured in this bucket with a thermometer graduated in 0.5 C intervals.

Station locations were determined by the officers of the watch, who also made the meteorological observations reported with the oceanographic data.

Experimental casts were made with a Bissett-Berman salinity-temperature-depth system.

LABORATORY PROCEDURES

The salinity determinations of the oceanographic station samples from Survey P-68-2, and of the daily surface samples taken in conjunction with the BT observations from both ships, were made with an inductive salinometer, Model 601 MK III, Auto-Lab Industries. Most of the oceanographic station samples were analysed on board "Vancouver". The salinity data are the means of duplicate determinations, and are considered to have an accuracy at the 35% salinity level of $\pm 0.003\%$. (Brown and Hamon, 1961).

The conversions from conductivity ratio to salinity were made from international oceanographic tables, published jointly by the National Institute of Oceanography, Great Britain, and UNESCO.

The dissolved oxygen analyses were done in the shipboard laboratory by a modified Winkler method (Strickland and Parsons, 1965). The data are the means of duplicate determinations.

BATHYTHERMOGRAPH OBSERVATIONS

Bathythermograph observations to 275 m depth were made from "Vancouver" every 3 hours during the patrol, and also on the return journey to the base. The "Quadra" made 14 BT observations during the journey to Station P, took 320 observations to 275 m every 3 hours while on station and made 21 BT observations on the ingoing trip.

The bathythermograms have been prepared by the Canadian Oceanographic Data Centre in their BT-aperture card format (Sauer, 1964), and copies are available from the Centre. The bathythermograms presented in Section IV of this data record were reproduced from the BT-aperture cards. The consecutive number entered below each bathythermogram refers to an entry in Table 1 or Table 2, which list the information concerning time/date, position and associated meteorological information.

PERSONNEL

The scientist-in-charge of the Station P program was Dr. C.A. Collins. The oceanographers on board "Vancouver" during survey P-68-2 were Mr. D.A. Healey and Mr. C. De Jong.

The master of the ship was Captain J.H. Linggard. The ships' crews made the BT observations.

SECTION II

Description of the machine-generated data record

INTRODUCTION

This section applies to the machine processing phase of the data reduction and computation.

The oceanographic data previously recorded on CODC data summary forms, a sample of which is shown on the next page, are transferred to punch-cards for subsequent electronic data processing on an IBM 1620 computer, using CODC's OCEANS II program. In addition to computing routine derived quantities, the program carries out unit and format conversions, range checks, plausibility tests, internal editing, and if required, interpolation at standard oceanographic depths. When interpolations are carried out, additional derived values are computed.

After the data have been processed, the data record is prepared using an IBM 1401 computer configuration with the OCEAN REPORT III program, which provides for pre-edited high speed print-out on continuous direct-image masters. These masters subsequently yield the required volume of copies for distribution.

Provision has been made to enter an "estimate of precision" for each observed variable selected for interpolation at standard oceanographic depths. The precision depends on the instrument and/or technique used to determine the variable. A standard precision stated as a standard deviation (σ) can be determined for each instrument or technique under routine field conditions by making duplicate determinations of the variables for a homogeneous sample of sea water. These standard deviations are given for each cruise under "GENERAL INFORMATION" in section III of the data record.

The measurement error estimate of a specific observation in this data record, is stated as a multiple of the standard deviation derived as above, and entered in a column immediately to the right of the reported variable. In order to distinguish it from an additional decimal digit, the measurement error estimate is recorded alphabetically, (i.e., $1\sigma = A$, $2\sigma = B$, etc.; in this data record "A" is suppressed).

An option is provided with respect to the measurement of the salinity variable. If observed to three decimal digits, the last digit takes the place of the measurement error estimate.

In the past, a number of methods for both manual and machine interpolation have been developed. Studies and comparisons of the several methods have shown that no single method is universally acceptable. The manual methods are the most elaborate and flexible, but often require subjective decisions. In machine interpolation, all the present methods fail to yield acceptable results under some circumstances. Hence, it is considered necessary to qualify interpolated values by stating an "interpolation error estimate" derived from the particular interpolation formula used. There are two purposes in stating the error estimates; first, to give an indication of the quality of the interpolated data; second, to allow the oceanographer to redesign his observational procedures in order to reduce interpolation errors in future observations.

The interpolation scheme chosen for the OCEANS II program consists of a combination of two 3-point interpolations using the Lagrangian interpolation polynomial, as recommended by Rattray (1962). A parabola is fitted through three values of a given variable (T, S, O₂) considered as a function of depth. The two interpolation parabolas require a total of four points (observed depths). The middle points are common to both parabolas. The average of the two values obtained from the parabolas at standard depth is taken as the interpolated value, and a function of their difference as an estimate of the interpolation error.

This function combined with the "measurement error estimate" comprises the "combined measurement and interpolation error estimate". It is expressed as a multiple of the standard deviation of measurement (σ) under normal routine field conditions by:

CANADIAN OCEANOGRAPHIC DATA CENTRE

O B S E R V . E D C A R D											
M A S T		T E									
1 8		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 19 20 21 22 23 24 25 26 27 28 29 30 31 34 35									
1	2	3	4	5	6	7	8	9	10	11	12
WATER	WAVES I	WAVES II	WIND	BAROMETER	AIR TEMP.	WET BULB	W.W.	CLOUD	18	20	21
COLOUR TRANS.	Dw Dw Pw Hw	Dw Dw Pw Hw	DIR. FORCE	14	15	16	17	HOURS	19	20	22
			SPD	13	14	15	16	TYPE	18	19	23
				BAROMETER	AIR TEMP.	WET BULB	W.W.	AMT.	19	20	24
				10	11	12	13	VIS.	20	21	25
				10	11	12	13	AFT.	21	22	26
				10	11	12	13	H.W.	22	23	27
				10	11	12	13	UNASSIGNED	23	24	28
				10	11	12	13		24	25	29
				10	11	12	13		25	26	30
				10	11	12	13		26	27	31
				10	11	12	13		27	28	32
				10	11	12	13		28	29	33
				10	11	12	13		29	30	34
				10	11	12	13		30	31	35
				10	11	12	13		31	32	36
				10	11	12	13		32	33	37
				10	11	12	13		33	34	38
				10	11	12	13		34	35	39
				10	11	12	13		35	36	40
				10	11	12	13		36	37	41
				10	11	12	13		37	38	42
				10	11	12	13		38	39	43
				10	11	12	13		39	40	44
				10	11	12	13		40	41	45
				10	11	12	13		41	42	46
				10	11	12	13		42	43	50
				10	11	12	13		43	44	55
				10	11	12	13		44	45	56
				10	11	12	13		45	46	57
				10	11	12	13		46	47	58
				10	11	12	13		47	48	59
				10	11	12	13		48	49	60
				10	11	12	13		49	50	61
				10	11	12	13		50	51	62
				10	11	12	13		51	52	63
				10	11	12	13		52	53	64
				10	11	12	13		53	54	65
				10	11	12	13		54	55	66
				10	11	12	13		55	56	67
				10	11	12	13		56	57	68
				10	11	12	13		57	58	69
				10	11	12	13		58	59	70
				10	11	12	13		59	60	71
				10	11	12	13		60	61	72
				10	11	12	13		61	62	73
				10	11	12	13		62	63	74
				10	11	12	13		63	64	75
				10	11	12	13		64	65	76
				10	11	12	13		65	66	77
				10	11	12	13		66	67	78
				10	11	12	13		67	68	79
				10	11	12	13		68	69	80

$$\frac{\sigma_i}{\sigma} = \left\{ \left(\frac{(\Delta V_i)^2}{\sigma^2} + \sum_{n=j-2}^{j+1} (\gamma_n)^2 \left(\frac{\sigma_n}{\sigma} \right)^2 \right) \right\}^{1/2} \quad , \text{ where}$$

σ = Standard deviation of the combined error estimates at standard oceanographic depth,

ΔV_i = the interpolation error estimate of variable "V" at standard oceanographic depth = $^{1/3} (\tilde{V}_{i_1} - \tilde{V}_{i_2})$

γ = Interpolation polynomial coefficient.

Z_j = Observed depth.

Z_i = Standard oceanographic depth, such that: $Z_{j-2} < Z_{j-1} < Z_i < Z_j < Z_{j+1}$

The integral part of the fraction $\frac{\sigma_i}{\sigma}$, if ≥ 2 , is reported in this Data Record following the interpolated variable. It represents the **combined measurement and interpolation error estimate**. In order to distinguish it from an additional decimal digit, it is recorded alphabetically (e.g.: 2 as "B", 3 as "C", etc.).

With respect to the interpolated value of the salinity variable if reported to three decimal digits, the **interpolation error estimate** is given only when $\frac{\sigma_i}{\sigma} \geq 2$ (the salinity is then recorded to two decimal places). If less than 2, the mean obtained from the two interpolation parabolas is reported to three decimal places.

EXPLANATION OF DATA RECORD HEADINGS

MASTER HEADINGS

(1) C-REF-NO	(6) YR	(11) DEPTH	(16) WAVES 1	(21) AIR T	(26) VIS
(2) CONS. NO	(7) MONTH	(12) MXSAMPD	(17) WAVES 2	(22) WET B	(27) STN
(3) LAT	(8) DAY	(13) NO. DPTH	(18) WND-DIR	(23) WW-CODE	
(4) LON	(9) HR	(14) W-COLOR	(19) WND-FCE	(24) CLD-TPE	
(5) MARSD SQ	(10) C/I	(15) W-TRNSP	(20) BARO	(25) CLD-AMT	(28) HW

(1) CRUISE REFERENCE NUMBER: Assigned by the Institute. Commences with 001 at the beginning of each year (effective Jan. 1, 1963). Prior to that date the CRN was a number designated by CODC.

(2) CONSECUTIVE NUMBER: Indicates the chronological order in which the stations were occupied.

(3) LATITUDE: Indicate the position of the platform at the time of observation.

(4) LONGITUDE: Indicate the position of the platform at the time of observation.

(5) MARSDEN SQUARE: Designates the geographic area code of the observation (see Marsden square chart).

(6) YEAR:

(7) MONTH:

(8) DAY:

(9) HOUR: The time (Greenwich Mean Time) at which the surface environmental data were recorded. It is reported to tenths of hours (Table 1). If an "X" precedes the value for HOUR, (prior to Jan. 1, 1963) it indicates that the reported time is doubtful.

(10) COUNTRY/INSTITUTE: The International Geophysical Year (IGY) Country Code/Institute Code - see Table 11.

(11) DEPTH: The sounding reported in metres. If corrected, this is stated in the "GENERAL INFORMATION" chapter of section III. Charted depths are preceded by the letter "C".

(12) MAXIMUM SAMPLING DEPTH: A code to indicate the deepest sampling depth (used for high speed sorting).
 00 m - 50 m = 00
 51 m - 150 m = 01
 151 m - 250 m = 02
 etc.

(13) NUMBER OF DEPTHS:

The number of levels observed (this is entered to initiate a computer safety check, guarding against the loss of punch-cards).

(14) WATER COLOUR:

A code based on the percentage of yellow (see table 2 and Note under FIELD "15" below).

(15) WATER

TRANSPARENCY: The depth in metres at which a Secchi disc (white disc, 30 cm. in diameter) just disappears from view, or the optical density expressed in percentage;

NOTE: The "GENERAL INFORMATION" chapter in section III of the data record will state which method was used.

(16) WAVES 1

($d_w d_w P_w H_w$ -code): The direction, period and height of the wind-propagated wave system. (See Tables 3, 4 and 5). Ref: World Meteorological Organization Codes 0885, 3155, 1555.

(17) WAVES 2

($d_w d_w P_w H_w$ -code): The direction, period and height of the predominant non-wind-propagated wave system. (See Tables 3, 4 and 5). Ref: World Meteorological Organization Codes 0885, 3155, 1555.

(18) WIND DIRECTION:

The true direction to the nearest 10 degrees from which the wind is blowing (wind direction 990 means:—wind variable or direction unknown).

(19) WIND FORCE
(WND-FCE):

Beaufort notation (See Table 6).

WIND SPEED
(WND-SPD):

Anemometer reading reported in metres per second. Instrument height reported in "GENERAL INFORMATION" chapter of section III.

(20) BAROMETER:

The barometric pressure reported in millibars: the "GENERAL INFORMATION" chapter in Section III of the data record will state the type of instrument used.

(21) AIR
TEMPERATURE:

In degrees Celsius.

(22) WET BULB:

In degrees Celsius.

(23) ww CODE:

Present Weather Code (See Table 7). Ref: WMO Code 4677

(24) CLOUD TYPE:

The type of predominating clouds (See Table 8). Ref: WMO Code 0500.

(25) CLOUD AMOUNT:

The sky coverage in eighths (See Table 9) Ref: WMO Code 2700

(26) VISIBILITY:

Visibility at the surface (See Table 10). Ref: WMO Code 4300.

(27) STATION:

A station reference number, assigned by the institute prior to, or during the survey.

(28) HOURS AFTER
HIGH WATER:

Indicates the state of the tide for nearshore observations.

OBSERVED DATA HEADINGS

(1) <i>GMT</i>	(2) <i>DEPTH</i>	(3) <i>TEMP</i>	(4) <i>SAL</i>	(5) <i>OXYGEN</i>	(6) <i>SGMT</i>
(7) <i>SOUND</i>	(8) <i>PO₄</i>	(9) <i>-P-</i>	(10) <i>NO₂</i>	(11) <i>NO₃</i>	(12) <i>SiO₃</i>
					(13) <i>pH</i>

NOTE: Headings (1) to (7) will always be present. Headings (8) to (13) appear only when one or more additional chemical entries were made.

(1) **G.M.T.:** The Greenwich Mean Time of (in-situ) thermometer inversion and sea water sample collection.

When a multiple cast was initiated prior to and continued after midnight, the times indicated are uninterrupted by the change of day and appear beyond 24.0 hours. This will be accompanied by a statement: "MULTIPLE CAST CONTINUED NEXT DAY", which is printed following the last level of observed values.

(2) **DEPTH:** The depth in metres at the reversal time of deepest cast.

(3) **TEMPERATURE:** Temperatures from deepsea reversing thermometers, read to 0.01° C. Surface temperature measurement procedures are described in the chapter "OBSERVATION PROCEDURES" of section I, and/or the "GENERAL INFORMATION" chapter of section III. An alphabetical character following the temperature value represents the measurement error estimate referred to in the INTRODUCTION to this section.

(4) **SALINITY:** Salinity as defined by: $S = 0.03 + 1.805 C1\%$, reported in:
 a. 1/100 parts per 1000, or
 b. 1/1000 parts per 1000.
 In case a: an alphabetical character following the value is the measurement error estimate as referred to under (3).
 In case b: no error estimate indication is provided for, but an additional decimal digit takes its place.

(5) **OXYGEN:** The concentration of dissolved oxygen expressed in millilitres per litre to 2 decimal places.
 An alphabetical character following the value is the measurement error estimate as referred to under (3).

(6) **SIGMA-T:** The specific gravity anomaly as defined by: (Specific gravity - 1) $\times 10^3$ (e.g., σ_t reported as 2456, reads 24.56, and corresponds to a specific gravity of 1.02456).

(7) **SOUND:** The sound velocity is reported in m/sec. to 1 decimal place (e.g., 1437.9 m/sec.). The computation is carried out using Wilson's formula (1960), expressed in terms of temperature, salinity and total pressure.

(8) PO ₄	Phosphate-Phosphorus reported to hundredths of microgram-atoms per litre.
(9) -P-	Total Phosphorus reported to hundredths of microgram-atoms per litre.
(10) NO ₂	Nitrite-Nitrogen reported to hundredths of microgram-atoms per litre – No dissolved nitrogen included –
(11) NO ₃	Nitrate-Nitrogen reported to tenths of microgram-atoms per litre.
(12) SiO ₂	Silicate-Silicon reported in whole microgram-atoms per litre.
(13) pH	The pH value.

NOTE: "TRC" (trace) is reported when a chemical entry has a value less than the standard deviation of measurement for that particular variable.

INTERPOLATED DATA HEADINGS

(1) DEPTH	(2) TEMP	(3) SAL	(4) OXYGEN	(5) SGMT	(6) SOUND
(7) DELTA-D	(8) POT-EN	(9) SVA.			

(1) DEPTH: Standard Oceanographic Depth in whole metres, as well as additional depths: 125, 175, 225, 3500, 4500, 5500, 6500, 7500, 8500, 9500.

(2) TEMPERATURE: Interpolated value at standard depth, followed by the **combined measurement and interpolation error estimate** (see "INTRODUCTION" to section II of the data record).

(3) SALINITY:

- A. The reported salinity values are measured to three decimal places.
 - (i) the interpolation error estimate is less than twice the standard deviation of measurement
 - the interpolated value is reported to three decimal places (e.g., 30.139).
 - (ii) the interpolation error estimate is equal to or greater than twice the standard deviation of measurement.
 - the interpolated value is reported to two decimal places, and followed by the **interpolation error estimate** (e.g., 29.23 C).
- B. The reported salinity values are measured to two decimal places and followed by the **measurement error estimate**.
 - the interpolated value is reported to two decimal places, and followed by the **combined measurement and interpolation error estimate** (e.g., 30.59 B).

(4) OXYGEN: Interpolated value at standard depth, followed by the **combined measurement and interpolation error estimate** (see "Introduction" to section II of the data record).

(5) SIGMA-T: Computed from temperature and salinity values at standard oceanographic depth.

(6) SOUND VELOCITY: Computed from temperature, salinity and total pressure values at standard oceanographic depth, using Wilson's formula (1960).

(7) DELTA-D: The geo-potential anomaly as defined by:

$$\Delta D = \int_o^p \delta dp$$

$$\Delta D \text{ is expressed in dynamic metres (10}^5 \text{ ergs/gram) and recorded to three decimal places (e.g., 2.345 dyn. metres).}$$

(8) POTENTIAL ENERGY ANOMALY: The Potential energy anomaly χ as defined by:

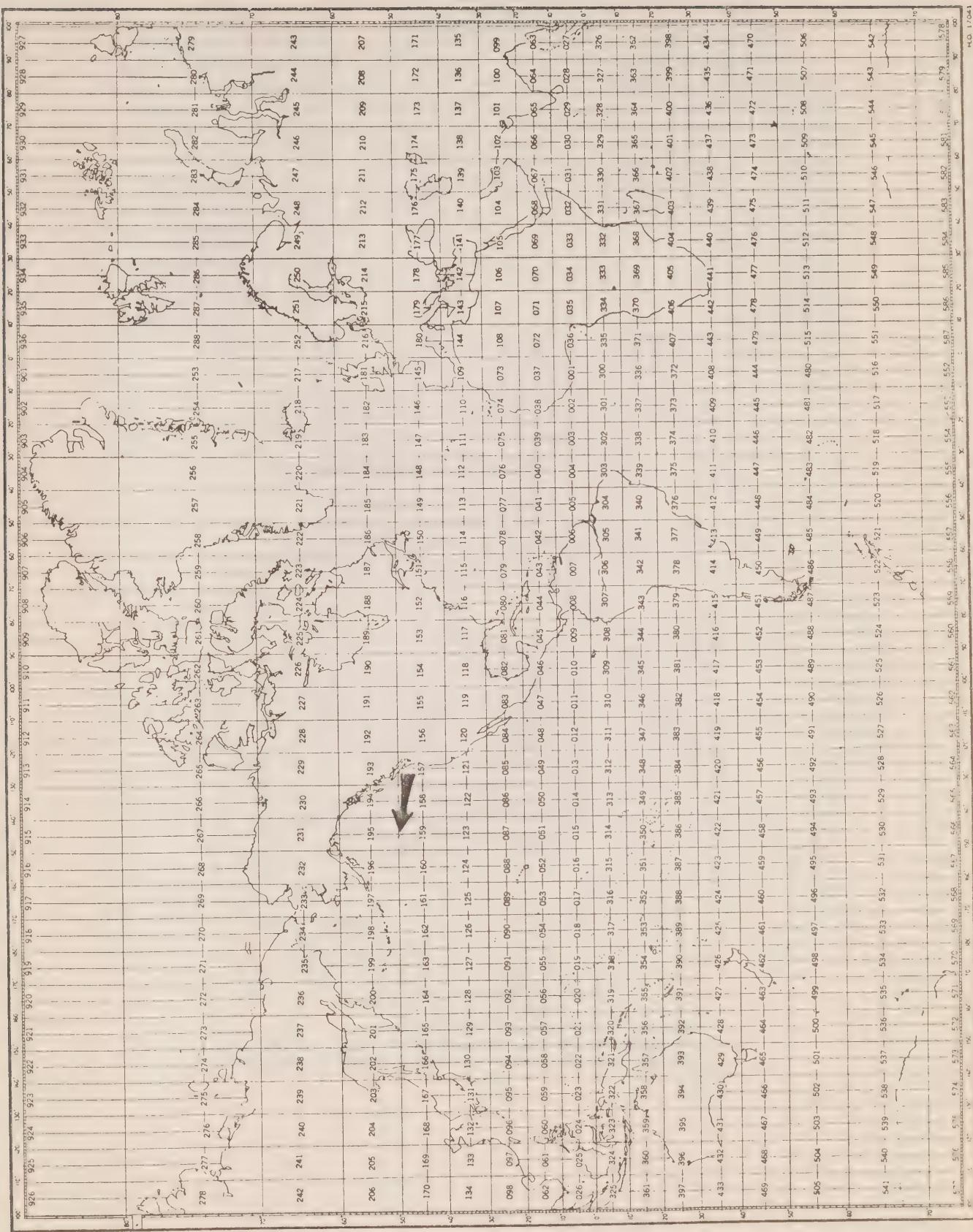
$$\chi = 1/g \int_o^p p \delta dp = \int_o^z \rho p \delta dz$$

$$\chi \text{ is expressed in units of } 10^8 \text{ ergs/cm}^2 \text{ and recorded to two decimal places (e.g., 116.44).}$$

(9) SPECIFIC VOLUME ANOMALY: The specific volume anomaly as defined by:

$$\delta = \alpha - \alpha_{35.0.P}$$

$$\delta \text{ is expressed in ml/gr, and conventionally reported as } 10^5 \delta, \text{ to one decimal place (i.e., } \delta \text{ reported as 1234, reads 123.4, and corresponds to a specific volume anomaly of 0.001234 ml/gr.).}$$



MARSDEN SQUARE CHART

Table 1

CONVERSION
MINUTES TO $\frac{1}{10}$ HRS.

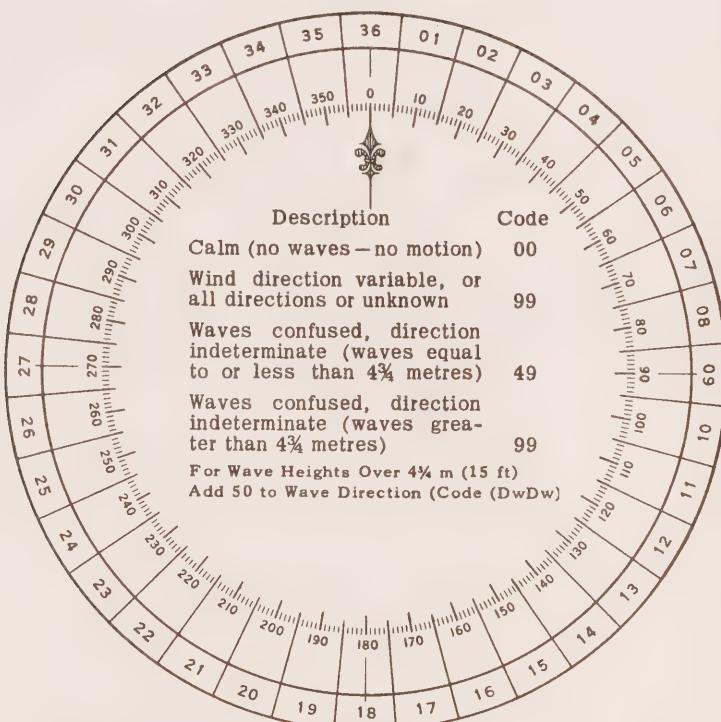
Minutes	Tenths Hrs.
00-03	0
04-08	1
09-15	2
16-20	3
21-27	4
28-32	5
33-39	6
40-44	7
45-51	8
52-56	9
57-59	0 (next HR.)

Table 2

WATER COLOR CODE
Based on Percentage Yellow

Code:	Description
00	Deep Blue
10	Blue
20	Greenish Blue
30	Bluish Green
40	Green
50	Light Green
60	Yellowish Green
70	Yellow Green
80	Green Yellow
90	Greenish Yellow
99	Yellow

Table 3. DIRECTION CODE (dd)



NOTE:

Always use the true direction from which the wind is blowing, or the direction from which Waves I (sea), or Waves II (swell) come.

Table 4. PERIOD OF THE WAVES (P_w)
(Measure to the Nearest Second)

Code:	Period in Seconds:	Code:	Period in Seconds:
2	5 sec. or less	8	16 or 17 sec.
3	6 or 7 sec.	9	18 or 19 sec.
4	8 or 9 sec.	0	20 or 21 sec.
5	10 or 11 sec.	1	Over 21 sec.
6	12 or 13 sec.	X	Calm, or period not determined
7	14 or 15 sec.		

Table 5. HEIGHT OF THE WAVES (H_w)

- The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.
- Each code figure provides for reporting a range of heights. For example: 1 = $\frac{1}{4}$ m (1 ft) to $\frac{3}{4}$ m (2 $\frac{1}{2}$ ft); 5 = $2\frac{1}{4}$ m (7 ft) to $2\frac{3}{4}$ m (9 ft); 9 = $4\frac{1}{4}$ m (13 $\frac{1}{2}$ ft) to $4\frac{3}{4}$ m (15 ft), etc.
- If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of $2\frac{3}{4}$ m is reported by code figure 5.

Code	Code
0 Less than $\frac{1}{4}$ m (1 ft)	0 5 m (16 ft)
1 $\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1 $5\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2 1 m (3 ft)	2 6 m (19 ft)
3 $1\frac{1}{2}$ m (5 ft)	Add 3 $6\frac{1}{2}$ m (21 ft)
4 2 m (6 $\frac{1}{2}$ ft)	50 4 7 m (22 $\frac{1}{2}$ ft)
5 $2\frac{1}{2}$ m (8 ft)	to 5 $7\frac{1}{2}$ m (24 ft)
6 3 m (9 $\frac{1}{2}$ ft)	Dw Dw 6 8 m (25 $\frac{1}{2}$ ft)
7 $3\frac{1}{2}$ m (11 ft)	7 $8\frac{1}{2}$ m (27 ft)
8 4 m (13 ft)	8 9 m (29 ft)
9 $4\frac{1}{2}$ m (14 ft)	9 $9\frac{1}{2}$ m (30 $\frac{1}{2}$ ft) or more
x Height not determined	

Table 6. WIND FORCE CODE

The Beaufort force of the wind is estimated from the appearance of the sea surface, according to the table below. This table is only intended as a guide to show roughly what may be expected on the open sea, remote from land. Factors which must be taken into account are the "lag" effect between the wind increasing and the sea getting up; and the influence of "fetch", depth, swell, heavy rain and tide effect on the appearance of the sea. Estimation of the wind force by this method becomes unreliable in shallow water or when close inshore, owing to the tidal effect and the shelter provided by the land.

Code	Appearance of sea if fetch and duration of the blow have been sufficient to develop the sea fully	Description
00	Sea like a mirror	Calm
01	Ripples with the appearance of scales are formed, but without foam crests.	Light Air
02	Small wavelets; crests have a glassy appearance and do not break.	Light Breeze
03	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses.	Gentle Breeze
04	Small waves, becoming longer; fairly frequent white horses.	Moderate breeze
05	Moderate waves; many white horses are formed (chance of some spray)	Fresh Breeze
06	Large waves; white foam crests everywhere (probably some spray)	Strong Breeze
07	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.	Near Gale
08	Moderately high waves; edges of crests begin to break into the spindrift; foam is blown in well-marked streaks along the direction of the wind.	Gale
09	High waves; dense streaks of foam along wind; crests begin to topple, tumble and roll over; spray may affect visibility.	Strong Gale
10	Very high waves with long overhanging crests; foam in great patches blown in dense white streaks along wind; sea surface takes a white appearance; tumbling becomes heavy and shock-like; visibility affected.	Storm
11	Exceptionally high waves (medium sized ships may be lost to view behind waves); sea covered with long white patches of foam lying along the wind; everywhere edges of crests are blown into froth; visibility affected.	Violent Storm
12	Air is filled with foam and spray; sea completely white with driving spray; visibility seriously affected.	Hurricane

Table 7. PRESENT WEATHER
W.W. CODE

NO PRECIPITATION ON STATION AT TIME OF OBSERVATION

No meteors except photometeors	Code figure ww	characteristic change of the state of sky during the past hour	ww = 20 - 29	
			Precipitation, fog, ice fog or thunderstorm at the station during the preceding hour but not at the time of observation	20 Drizzle (not freezing) or snow grains
	00	Cloud development not ob- served or not observable		
	01	Clouds generally dissolving or becoming less developed		
	02	State of sky on the whole unchanged		
	03	Clouds generally forming or developing		
	04	Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes		
	05	Haze		
	06	Widespread dust in suspension in the air, not raised by wind at or near the station at the time of observation		
	07	Dust or sand raised by wind at or near the sta- tion at the time of observation, but no well de- veloped dust whirl(s) or sand whirl(s), and no duststorm or sandstorm seen		
	08	Well developed dust whirl(s) or sand whirl(s) seen at or near the station during the preced- ing hour or at the time of observation, but no duststorm or sandstorm		
	09	Duststorm or sandstorm within sight at the time of observation, or at the station during the pre- ceding hour		
	10	Mist		
	11	Patches of shallow fog or ice fog at the sta- tion, whether on land or sea, not		
	12	More or less deeper than about 2 metres on continuous land or 10 metres at sea		
	13	Lightning visible, no thunder heard		
	14	Precipitation within sight, not reaching the ground or the surface of the sea		
	15	Precipitation within sight, reaching the ground or the surface of the sea, but distant (i.e. es- timated to be more than 5 km) from the station		
	16	Precipitation within sight, reaching the ground or the surface of the sea, near to, but not at the station		
	17	Thunderstorm, but no precipitation at the time of observation		
	18	Squalls at or within sight of the sta- tion during the preceding hour		
	19	Funnel clouds or at the time of observation		
ww = 30 - 39				
	30		- has decreased during the preceding hour	
	31	Slight or mo- derate dust- storm or sand- storm	- no appreciable change during the preceding hour	
	32		- has begun or has increased during the preceding hour	
	33		- has decreased during the preceding hour	
	34	Severe dust- storm or sand- storm	- no appreciable change du- ring the preceding hour	
	35		- has begun or has increased during the preceding hour	
	36	Slight or moderate blowing snow	- generally low (below eye level)	
	37	Heavy drifting snow		
	38	Slight or moderate blowing snow	- generally high (above eye level)	
	39	Heavy blowing snow		
ww = 40 - 49				
	40	Fog or ice fog at the time of observation		
	41	Fog or ice fog in patches		
	42	Fog or ice fog, sky visible	has become thinner during the preceding hour	
	43	Fog or ice fog, sky invisible		
	44	Fog or ice fog, sky visible	no appreciable change during the preceding hour	
	45	Fog or ice fog, sky invisible		
	46	Fog or ice fog, sky visible	has begun or has become thicker during the pre- ceding hour	
	47	Fog or ice fog, sky invisible		
	48	Fog, depositing rime, sky visible		
	49	Fog, depositing rime, sky invisible		

NO PRECIPITATION ON STATION AT TIME OF OBSERVATION

PRECIPITATION ON STATION AT TIME OF OBSERVATION

ww = 50 - 59	Drizzle	ww = 80 - 99	Showery precipitation, or precipitation with current or recent thunderstorm
50	Drizzle, not freezing, intermittent	80	Rain shower(s), slight
51	Drizzle, not freezing, continuous	81	Rain shower(s), moderate or heavy
52	Drizzle, not freezing, intermittent	82	Rain shower(s), violent
53	Drizzle, not freezing, continuous	83	Shower(s) of rain and snow mixed, slight
54	Drizzle, not freezing, intermittent	84	Shower(s) of rain and snow mixed, moderate or heavy
55	Drizzle, not freezing, continuous	85	Snow shower(s), slight
56	Drizzle, freezing, slight	86	Snow shower(s), moderate or heavy
57	Drizzle, freezing, moderate or heavy (dense)	87	Shower(s) of snow pellets or ice pellets, type (b), with or without rain
58	Drizzle and rain, slight	88	or rain and snow mixed
59	Drizzle and rain, moderate or heavy	89	Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder
ww = 60 - 69	Rain	90	- slight
60	Rain, not freezing, intermittent	91	- moderate or heavy
61	Rain, not freezing, continuous	92	Slight rain at time of observation
62	Rain, not freezing, intermittent	93	Moderate or heavy rain at time of observation
63	Rain, not freezing, continuous	94	Thunderstorm during the preceding hour but not at time of observation
64	Rain, not freezing, intermittent	95	Slight snow, or rain and snow mixed or hail at time of observation
65	Rain, not freezing, continuous	96	Moderate or heavy snow, or rain and snow mixed or hail at time of observation
66	Rain, freezing, slight	97	Thunderstorm, slight or moderate, without hail, but with rain and/or snow at time of observation
67	Rain, freezing, moderate or heavy	98	Thunderstorm, slight or moderate, with hail at time of observation
68	Rain or drizzle and snow, slight	99	Thunderstorm, heavy, without hail, but with rain and/or snow at time of observation
69	Rain or drizzle and snow, moderate or heavy		Thunderstorm, combined with duststorm or sandstorm at time of observation
70 - 79	Solid precipitation not in showers		Thunderstorm, heavy, with hail at time of observation
ww			
70	Intermittent fall of snow flakes	70	Slight at time of observation
71	Continuous fall of snow flakes	71	Moderate at time of observation
72	Intermittent fall of snow flakes	72	Heavy at time of observation
73	Continuous fall of snow flakes	73	
74	Intermittent fall of snow flakes	74	
75	Continuous fall of snow flakes	75	
76	Ice prisms (with or without fog)	76	
77	Snow grains (with or without fog)	77	
78	Isolated starlike snow crystals (with or without fog)	78	
79	Ice pellets, type (a)	79	

PRECIPITATION ON STATION AT TIME OF OBSERVATION

Table 8. CLOUD TYPE CODE

Code	Cloud Type	Code	Cloud Type
0	Cirrus	Ci	Nimbostratus
1	Cirrocumulus	Cc	Stratocumulus
2	Cirrostratus	Cs	Stratus
3	Altocumulus	Ac	Cumulus
4	Altostratus	As	Cumulonimbus
X	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena		

Table 9. CLOUD AMOUNT CODE

Code	Cloud Cover	Code	Cloud Cover
0	0	6	6 oktas
1	1 okta or less, but not zero	7	7 oktas or more, but not 8 oktas
2	2 oktas	8	8 oktas
3	3 oktas	9	Sky obscured, or cloud amount cannot be estimated
4	4 oktas		
5	5 oktas		

Note: 1 okta = $\frac{1}{8}$ of the sky covered

Table 10. VISIBILITY

Code	Estimate of hor. Visibility
0	Less than 50 metres (less than 55 yards)
1	50-200 metres (approx. 55-220 yards)
2	200-500 metres (approx. 220-550 yards)
3	500-1,000 metres (approx. 550 yards- $\frac{5}{6}$ n.m.)
4	1-2 km (approx. $\frac{5}{6}$ -1 n.m.)
5	2-4 km (approx. 1-2 n.m.)
6	4-10 km (approx. 2-6 n.m.)
7	10-20 km (approx. 6-12 n.m.)
8	20-50 km (approx. 12-30 n.m.)
9	50 km or more (30 n.m. or more)

Note: n.m. = nautical mile

TABLE 11. INSTITUTE CODE

Code	Institute
01	Marine Ecology Laboratory, Bedford Institute
02	Pacific Oceanographic Group
03	Biological Station, St. Andrews, N.B.
04	Arctic Biological Station, Ste. Anne de Bellevue, P.Q.
05	Biological Station, St. John's Nfld.
06	Station de Biologie Marine, Grande Riviere, P.Q.
07	Marine Sciences Branch, Central Region
08	Defence Research Establishment, Atlantic
09	Defence Research Establishment, Pacific
10	Atlantic Oceanographic Laboratory, Bedford Institute
11	Polar Continental Shelf Project
12	Great Lakes Institute
13	Institute of Oceanography, University of British Columbia
14	Institute of Oceanography, Dalhousie University
15	Marine Sciences Branch, Pacific Region
16	Department of Transport
17	Marine Sciences Centre, McGill University
18	Canadian Forces Maritime Command, East Coast
19	Canadian Forces Maritime Command, West Coast
20	Ontario Water Resources Commission
21	Dept. of National Health and Welfare
22	Inland Waters Branch, Dept. of Energy, Mines and Resources.

SECTION III

Serial oceanographic data

GENERAL INFORMATION

Institute: Pacific Oceanographic Group, Nanaimo, B.C.
Observation platform: CCGS "Vancouver"
Vessel's cruising speed: 18 knots
Total number of stations occupied: 24
Anemometer height above sea level: 20 metres
Water transparency: Secchi Disc
Barometer readings: Aneroid Barometer (corrected)
Air temperature: Sling Psychrometer
Wet bulb temperature: Sling Psychrometer
Surface sea water temperature: Bucket sample (deck thermometer)
Depth to bottom: U.S. Coast & Geodetic Survey Chart 8500

The following Standard Deviations were used to express both measurement and interpolation error estimates:

Temperature	0.02
Salinity	0.003
Oxygen	0.03

C-REF-NO 005 YR 1968 DEPTH C 128 WAVES 1 9950 AIR T 12.8 VIS 6
 CONS. NO 001 MONTH 5 MXSAMPD 01 WAVES 2 2481 WET B 11.6 STN 001
 LAT 48-330N DAY 18 NO.DPTH 7 WND-DIR 280 WW-CODE 42
 LON 125-320W HR 02.9 W-COLOR WND-SPD 05 CLD-TPE 4
 MARSID SQ 157 C/I 1802 W-TRNSP BARO 1018.5 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
029	0000	106	B	31582	2421	14882
029	0010	1010		31641	2434	14866
029	0020	0914		31832	2464	14835
029	0030	0826		32095	2498	14806
029	0050	0749		32886	2571	14790
029	0075	0677		33543	2632	14775
029	0100	0657	B	33678	2646	14773

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1060	B	31582	2421	14882	0000	00000	3720
0010	1010		31641	2434	14866	0037	00002	3598
0020	0914		31832	2464	14835	0071	00007	3311
0030	0826		32095	2498	14806	0103	00015	2990
0050	0749		32886	2571	14790	0156	00036	2299
0075	0677		33543	2632	14775	0207	00068	1718
0100	0657	B	33678	2646	14773	0249	00105	1595

C-REF-NO 005 YR 1968 DEPTH C 109 WAVES 1 9950 AIR T 11.6 VIS 6
 CONS. NO 002 MONTH 5 MXSAMPD 01 WAVES 2 26XX WET B 10.5 STN 002
 LAT 48-380N DAY 18 NO.DPTH 6 WND-DIR 280 WW-CODE 42
 LON 126-000W HR 04.3 W-COLOR WND-SPD 05 CLD-TPE 4
 MARSD SQ 157 C/I 1802 W-TRNSP BARO 1017.5 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
043	0000	118 B	31712		2410	14926
043	0010	0930	31874		2465	14840
043	0020	0794	32285		2518	14795
043	0030	0744	32557		2546	14781
043	0050	0716	32775		2567	14776
043	0075	0714	33413		2617	14787

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1180 B	31712		2410	14926	0000	00000	3826
0010	0930	31874		2465	14840	0036	00002	3302
0020	0794	32285		2518	14795	0067	00006	2803
0030	0744	32557		2546	14781	0093	00013	2534
0050	0716	32775		2567	14776	0142	00033	2338
0075	0714	33413		2617	14787	0195	00066	1863

C-REF-NO 005 YR 1968 DEPTH C 1300 WAVES 1 XX AIR T 12.2 VIS 8
 CONS. NO 003 MONTH 5 MXSAMPD 03 WAVES 2 XX WET B 11.1 STN 003
 LAT 48-420N DAY 18 NO.DPTH 13 WND-DIR 280 WW-CODE 02
 LON 126-400W HR 07.1 W-COLOR WND-SPD 05 CLD-TPE 4
 MARSD SQ 157 C/I 1802 W-TRNSP BARO 1018.0 CLD-AMT 4 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
071	0000		30999			
071	0010	0975	32081		2474	14859
071	0020	0891	32215		2498	14831
071	0030	0835	32322		2514	14813
071	0050	0813	32429		2526	14809
071	0075	0762	32857		2567	14799
071	0100	0741	33290		2604	14801
071	0125	0727	33611		2631	14803
071	0150	0718	33773		2645	14806
071	0175	0700	33861		2654	14804
077	0198	0664	33918		2664	14795
077	0247	0633	33951		2670	14791
077	0297	0572	33982		2681	14775

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	PDT.EN	SVA
0000		30999						
0010	0975	32081		2474	14859	0037	00002	3217
0020	0891	32215		2498	14831	0068	00006	2993
0030	0835	32322		2514	14813	0097	00014	2834
0050	0813	32429		2526	14809	0153	00037	2727
0075	0762	32857		2567	14799	0217	00077	2341
0100	0741	33290		2604	14800	0271	00125	1994
0125	0727	33611		2631	14803	0318	00179	1741
0150	0718	33773		2645	14806	0361	00239	1612
0175	0700	33861		2654	14804	0400	00304	1526
0200	0662	33921		2664	14794	0437	00376	1436
0225	0645 B	3394 B		2668	14792	0473	00454	1399
0250	0616 E	3397 D		2674	14785	0508	00538	1346
0300	0569	33981		2681	14774	0574	00725	1286

C-REF-NO 005 YR 1968 DEPTH C 2499 WAVES 1 2851 AIR T 10.1 VIS 8
 CONS. NO 004 MONTH 5 MXSAMPD 24 WAVES 2 XX WET B 08.7 STN 004
 LAT 48-46DN DAY 18 NO.DPTH 22 WND-DIR 280 WW-CODE 02
 LON 127-400W HR 11.3 W-COLOR WND-SPD 06 CLD-TPE 6
 MARSD SQ 157 C/I 1802 W-TRNSP BARO 1018.6 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	P	SAL	OXYGEN	SGMT	SOUND
113	0000	103	B	32253		2478	14880
113	0010	1044		32253		2476	14886
113	0020	1025		32255		2479	14881
113	0030	0928		32261		2495	14847
113	0050	0774		32389		2529	14793
113	0075	0752		32626		2550	14792
113	0100	0715		33211		2601	14789
113	0125	0756		33611		2627	14815
113	0150	0733		33784		2644	14812
113	0175	0700		33833		2652	14804
113	0200	0681		33919		2662	14802
113	0250	0608		33926		2672	14781
113	0300	0558		33944		2679	14769
113	0400	0497		34014		2692	14762
119	0500	0467		34093		2702	14767
119	0600	0430		34204		2714	14769
119	0800	0379		34303		2728	14782
119	1000	0335	B	34390		2739	14798
119	1200	0296		34445		2747	14816
119	1500	0242	B	34514		2757	14844
119	2000	0191		34594		2768	14908
119	2400	0177		34627		2771	14970

INTERPOLATED

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1030	B	32253	2478	14880	0000	00000	3175
0010	1044		32253	2476	14886	0032	00002	3199
0020	1025		32255	2479	14881	0064	00007	3169
0030	0928		32261	2495	14847	0095	00014	3015
0050	0774		32389	2529	14793	0153	00038	2703
0075	0752		32626	2550	14792	0218	00079	2500
0100	0715		33211	2601	14789	0275	00130	2019
0125	0756		33611	2627	14815	0323	00184	1780
0150	0733		33784	2644	14812	0366	00245	1624
0175	0700		33833	2652	14804	0406	00311	1547
0200	0681		33919	2662	14802	0443	00384	1461
0225	0646	B	3394 C	2667	14792	0480	00463	1407
0250	0608		33926	2672	14781	0515	00548	1369
0300	0558		33944	2679	14769	0582	00737	1300

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0400	0497	34014		2692	14762	0707	01185	1186
0500	0467	34093		2702	14767	0823	01717	1103
0600	0430	34204		2714	14769	0928	02311	0987
0700	0402	3427 B		2722	14775	1025	02953	0919
0800	0379	34303		2728	14782	1115	03651	0873
1000	0335 B	34390		2739	14798	1282	05183	0774
1200	0296	34445		2747	14816	1431	06869	0702
1500	0242 B	34514		2757	14844	1631	09616	0607
2000	0191	34594		2768	14908	1914	14672	0510

C-REF-NO 005 YR 1968 DEPTH C 2529 WAVES 1 00XX AIR T 09.9 VIS 7
 CONS. NO 005 MONTH 5 MXSAMPD 04 WAVES 2 2562 WET B 08.8 STN 005
 LAT 48-510N DAY 18 NO.DPTH 14 WND-DIR CALM WW-CCDE 02
 LON 128-400W HR 15.4 W-COLOR WND-SPD 00 CLD-TPE 6
 MARSD SQ 157 C/I 1802 W-TRNSP BARO 1018.1 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
154	0000	103	B	32033	2461	14877
154	0010	0946		32058	2477	14848
154	0020	0956		32398	2502	14858
154	0030	0898		32420	2513	14838
154	0050	0825		32426	2524	14814
154	0075	0759		32472	2537	14793
154	0099	0699		33041	2590	14781
154	0124	0733	B	33450	2618	14803
154	0149	0709		33661	2637	14801
154	0173	0694		33760	2647	14800
154	0198	0661		33863	2660	14793
154	0248	0612	B	33889	2668	14782
154	0298	0596		33957	2676	14784
154	0398	0531		34024	2689	14775

*WAVES NOT COMPATIBLE WITH WIND

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1030	B	32033	2461	14877	0000	00000	3338
0010	0946		32058	2477	14848	0033	00002	3190
0020	0956		32398	2502	14858	0064	00006	2955
0030	0898		32420	2513	14838	0093	00014	2852
0050	0825		32426	2524	14814	0149	00037	2746
0075	0759		32472	2537	14793	0217	00080	2624
0100	0700		33061	2591	14781	0276	00132	2110
0125	0733	B	33461	2618	14804	0326	00190	1859
0150	0708		33666	2638	14801	0371	00252	1678
0175	0692		33769	2648	14800	0412	00321	1583
0200	0659		33866	2660	14792	0450	00394	1471
0225	0631		3389 D	2666	14785	0487	00474	1422
0250	0611	B	33892	2668	14782	0522	00560	1398
0300	0584	D	3394 D	2676	14779	0591	00754	1333
0400	0530		34026	2689	14775	0720	01214	1217

C-REF-NO 005 YR 1968 DEPTH C 2929 WAVES 1 0951 AIR T 10.4 VIS 8
 CONS. NO 006 MONTH 5 MXSAMPD 15 WAVES 2 X2 WET B 09.4 STN 006
 LAT 49-020N DAY 18 NO.DPTH 20 WND-DIR 090 WW-CODE 02
 LON 130-400W HR 21.2 W-COLOR WND-SPD 05 CLD-TPE 6
 MARSID SQ 158 C/I 1802 W-TRNSP BARO 1016.0 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
212	0000	098	B	31920	2461	14857
212	0010	0931		32019	2476	14842
212	0020	0802		32325	2519	14798
212	0030	0778		32412	2530	14792
212	0050	0735		32435	2538	14779
212	0075	0680		32735	2569	14765
212	0100	0702		33239	2605	14785
212	0125	0700	B	33551	2630	14792
212	0150	0681		33734	2647	14791
212	0175	0654		33835	2658	14786
212	0200	0629		33866	2664	14780
212	0250	0598		33918	2672	14777
212	0300	0549		33958	2681	14766
212	0400	0483		34023	2694	14756
218	0500	0459		34110	2704	14764
218	0600	0427		34184	2713	14768
218	0800	0376		34293	2727	14781
218	1000	0326	B	34387	2739	14794
218	1200	0286		34441	2747	14812
218	1500	0240	B	34514	2757	14843

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0980	B	31920	2461	14857	0000	00000	3343
0010	0931		32019	2476	14842	0033	00002	3196
0020	0802		32325	2519	14798	0063	00006	2784
0030	0778		32412	2530	14792	0090	00013	2688
0050	0735		32435	2538	14779	0144	00035	2616
0075	0680		32735	2569	14765	0206	00074	2325
0100	0702		33239	2605	14785	0260	00122	1981
0125	0700	B	33551	2630	14792	0307	00176	1749
0150	0681		33734	2647	14791	0349	00235	1592
0175	0654		33835	2658	14786	0388	00300	1485
0200	0629		33866	2664	14780	0425	00370	1433
0225	0613		33894	2668	14778	0460	00448	1396
0250	0598		33918	2672	14777	0495	00533	1362
0300	0549		33958	2681	14766	0562	00720	1278
0400	0483		34023	2694	14756	0685	01160	1163
0500	0459		34110	2704	14764	0798	01682	1081

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0600	0427	34184		2713	14768	0903	02273	0999
0700	0400	34243		2721	14774	1001	02924	0933
0800	0376	34293		2727	14781	1092	03629	0877
1000	0326 B	34387		2739	14794	1259	05156	0766
1200	0286	34441		2747	14812	1406	06823	0694
1500	0240 B	34514		2757	14843	1604	09549	0604

C-REF-NO 005 YR 1968 DEPTH C 3275 WAVES 1 0152 AIR T 09.4 VIS 7
 CONS. NO 007 MONTH 5 MXSAMPD 04 WAVES 2 2562 WET B 08.8 STN 007
 LAT 49-090N DAY 19 NO.DPTH 14 WND-DIR 010 WW-CODE 02
 LON 132-400W HR 03.5 W-COLOR WND-SPD 07 CLD-TPE 6
 MARSD SQ 158 C/I 1802 W-TRNSP BARO 1011.3 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
035	0000	093	B	32516	2515	14846
035	0010	0908		32491	2517	14839
035	0020	0842		32486	2526	14816
035	0030	0829		32484	2528	14813
035	0049	0787		32484	2534	14799
035	0073	0712		32503	2546	14774
035	0098	0667		32997	2591	14767
035	0123	0674	B	33449	2625	14780
035	0147	0664		33653	2643	14783
035	0171	0643		33773	2655	14780
035	0196	0613		33821	2663	14773
035	0246	0567		33863	2672	14763
035	0295	0517		33908	2681	14751
035	0395	0457		33996	2695	14744

INTERPOLATED

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0930	B 32516		2515	14846	0000	00000	2824
0010	0908	32491		2517	14839	0028	00001	2811
0020	0842	32486		2526	14816	0056	00006	2720
0030	0829	32484		2528	14813	0083	00013	2705
0050	0784	32480		2534	14798	0137	00035	2648
0075	0707	3253 B		2549	14773	0202	00076	2509
0100	0667	33038		2594	14768	0260	00127	2085
0125	0674	B 33472		2627	14780	0309	00183	1774
0150	0662	33672		2645	14783	0351	00243	1613
0175	0638	33784		2657	14779	0390	00308	1503
0200	0609	33826		2664	14772	0427	00379	1438
0225	0585	33850		2668	14767	0463	00457	1395
0250	0563	33867		2673	14762	0498	00541	1357
0300	0518	B 33911		2681	14752	0564	00728	1276
0400	0454	34001		2696	14744	0687	01165	1147

C-REF-NO 005 YR 1968 DEPTH C 3549 WAVES 1 1052 AIR T 08.3 VIS 5
 CONS. NO 008 MONTH 5 MXSAMPD 04 WAVES 2 99X1 WET B 08.3 STN 008
 LAT 49-170N DAY 19 NO.DPTH 14 WND-DIR 100 WND-CODE 47
 LON 134-400W HR 09.6 W-COLOR WND-SPD 10 CLD-TPE
 MARSD SQ 158 C/I 1802 W-TRNSP BARO 1005.9 CLD-AMT 9 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
096	0000	087. B	32543		2526	14824
096	0010	0850	32532		2529	14818
096	0020	0781	32525		2538	14793
096	0030	0762	32522		2541	14787
096	0050	0705	32518		2548	14768
096	0075	0651	32530		2556	14751
096	0099	0627	32575		2563	14746
096	0125	0556	32834		2592	14725
096	0149	0531	33327		2634	14725
096	0173	0528	33635		2658	14732
096	0198	0497	33741		2670	14725
096	0248	0432	33785		2681	14706
096	0298	0399	33836		2688	14701
096	0398	0373	33973		2702	14709

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0870 B	32543		2526	14824	0000	00000	2715
0010	0850	32532		2529	14818	0027	00001	2696
0020	0781	32525		2538	14793	0054	00005	2606
0030	0762	32522		2541	14787	0080	00012	2584
0050	0705	32518		2548	14768	0131	00033	2515
0075	0651	32530		2556	14751	0194	00073	2441
0100	0624	32580		2564	14745	0254	00127	2374
0125	0556	32834		2592	14725	0311	00192	2106
0150	0531	33344		2635	14725	0359	00259	1699
0175	0526	33649		2660	14732	0398	00325	1468
0200	0494	33745		2671	14724	0434	00393	1363
0225	0460	3378 C		2677	14714	0468	00467	1303
0250	0430	33787		2681	14706	0500	00546	1267
0300	0393 B	33839		2689	14699	0562	00720	1193
0400	0373	33976		2702	14709	0677	01129	1078

C-REF-NO 005 YR 1968 DEPTH C 3774 WAVES 1 0963 AIR T 09.7 VIS 6
 CONS. NO 009 MONTH 5 MXSAMPD 06 WAVES 2 1063 WET B 08.9 STN 009
 LAT 49-260N DAY 19 NO.DPTH 16 WND-DIR 090 WW-CODE 50
 LON 136-400W HR 17.0 W-COLOR WND-SPD 11 CLD-TPE 7
 MARSD SQ 158 C/I 1802 W-TRNSP BARO 1002.1 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
170	0000	083	B	32546	2533	14809
170	0010	0805		32530	2535	14801
170	0019	0807		32530	2535	14803
170	0028	0738		32530	2545	14778
170	0047	0638		32536	2558	14741
170	0070	0609		32550	2563	14733
170	0093	0585		32565	2567	14728
170	0117	0536	B	32824	2593	14715
170	0140	0498		33490	2650	14712
170	0163	0485		33701	2669	14713
170	0187	0460		33756	2676	14708
170	0234	0413		33794	2684	14696
170	0282	0383	B	33846	2691	14692
170	0377	0366		33956	2701	14702
170	0474	0368		34054	2709	14720
170	0573	0360		34146	2717	14735

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0830	B	32546	2533	14809	0000	00000	2656
0010	0805		32530	2535	14801	0027	00001	2634
0020	0801		32530	2536	14801	0053	00005	2630
0030	0724		32530	2547	14773	0079	00012	2528
0050	0631		32538	2559	14739	0129	00032	2408
0075	0605		3254	2563	14732	0189	00071	2375
0100	0571		3261	2572	14724	0248	00123	2293
0125	0521		3306	2614	14713	0300	00184	1899
0150	0491		3362	2661	14713	0343	00242	1449
0175	0473		3374	2673	14711	0378	00301	1340
0200	0446		33770	2678	14704	0411	00365	1291
0225	0421		33790	2682	14698	0443	00434	1253
0250	0401		33810	2686	14694	0474	00510	1219
0300	0377	B	33867	2693	14693	0534	00679	1156
0400	0366		33980	2703	14706	0646	01080	1068
0500	0362	B	34080	2712	14722	0750	01560	0996

C-REF-NO 005 YR 1968 DEPTH C 3889 WAVES 1 0552 AIR T 07.8 VIS 5
 CONS. NO 010 MONTH 5 MXSAMPD 04 WAVES 2 99X3 WET B 07.8 STN 010
 LAT 49-340N DAY 19 NO.DPTH 14 WND-DIR 050 WW-CODE 46
 LON 138-400W HR 23.6 W-COLOR WND-SPD 09 CLD-TPE 6
 MARSD SQ 158 C/I 1802 W-TRNSP BARO 997.5 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
236	0000	083	B	32556	2533	14809
236	0010	0825		32539	2533	14808
236	0020	0824	B	32539	2533	14810
236	0030	0696		32538	2551	14762
236	0049	0656		32559	2558	14749
236	0074	0634		32586	2563	14745
236	0098	0614		32567	2564	14740
236	0123	0557		32802	2589	14724
236	0148	0485		33267	2634	14705
236	0172	0493		33609	2660	14717
236	0197	0458		33759	2676	14709
236	0246	0424		33816	2684	14703
236	0296	0393		33874	2692	14699
236	0395	0369		33970	2702	14707

INTERPOLATED

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0830	B	32556	2533	14809	0000	00000	2648
0010	0825		32539	2533	14808	0027	00001	2655
0020	0824	B	32539	2533	14810	0053	00005	2655
0030	0696		32538	2551	14762	0079	00012	2486
0050	0655		32561	2558	14749	0129	00032	2420
0075	0633		32583	2563	14745	0189	00071	2380
0100	0610		32577	2565	14739	0249	00124	2360
0125	0550		3284 B	2593	14722	0305	00189	2097
0150	0485		33301	2637	14706	0352	00255	1680
0175	0490		33635	2663	14716	0392	00320	1438
0200	0455		33767	2677	14708	0426	00386	1304
0225	0436		3381 D	2683	14704	0458	00457	1252
0250	0421		33821	2685	14703	0490	00533	1232
0300	0393		33877	2692	14700	0550	00703	1165
0400	0369		33975	2702	14707	0663	01107	1075

C-REF-NO 005 YR 1968 DEPTH C 3880 WAVES 1 0452 AIR T 08.8 VIS 5
 CONS. NO 011 MONTH 5 MXSAMPD 10 WAVES 2 99X5 WET B 07.7 STN 011
 LAT 49-410N DAY 20 NO.DPTH 18 WND-DIR 030 WW-CODE 44
 LON 140-400W HR 06.6 W-COLOR WND-SPD 07 CLD-TPE 6
 MARSD SQ 159 C/I 1802 W-TRNSP BARO 995.6 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
066	0000		32549			
066	0010	0808	32535		2535	14802
066	0020	0809 B	32532		2535	14804
066	0029	0779	32537		2539	14794
066	0048	0610	32546		2563	14730
066	0072	0585	32553		2566	14724
066	0096	0560	32561		2570	14718
066	0120	0515	32815		2595	14707
066	0144	0474	33460		2651	14702
066	0168	0469	33669		2668	14707
066	0192	0432	33750		2678	14697
066	0241	0397	33824		2688	14691
066	0290	0388	33882		2693	14696
066	0390	0381	33999		2703	14711
077	0498	0374	34124		2714	14728
077	0598	0359	34196		2721	14739
077	0798	0332	34306		2732	14762
077	0998	0295 B	34386		2742	14781

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000		32549						
0010	0808	32535		2535	14802	0026	00001	2635
0020	0809 B	32532		2535	14804	0053	00005	2640
0030	0770 B	32538		2541	14791	0079	00012	2584
0050	0604 B	32547		2563	14728	0129	00032	2369
0075	0582	3255 B		2566	14723	0188	00070	2346
0100	0553	32581		2572	14716	0247	00123	2290
0125	0505	3295 H		2607	14705	0300	00184	1961
0150	0473	3354 C		2657	14704	0344	00244	1488
0175	0459	33701		2671	14705	0379	00304	1355
0200	0424	33767		2680	14695	0413	00367	1270
0225	0404	3381 B		2686	14691	0444	00436	1222
0250	0394	33835		2689	14692	0474	00510	1193
0300	0387	33894		2694	14697	0533	00676	1146
0400	0381	34012		2704	14713	0645	01074	1059
0500	0374	34126		2714	14728	0747	01547	0975
0600	0359	34197		2721	14739	0843	02084	0913
0700	0346	34257		2727	14751	0932	02683	0862

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0800	0330	34309		2733	14762	1017	03335	0813
1000	0295 B	34387		2742	14781	1173	04774	0731

C-REF-NO 005 YR 1968 DEPTH C 3909 WAVES 1 9952 AIR T 09.7 VIS 5
 CONS. NO 012 MONTH 5 MXSAMPD 04 WAVES 2 0153 WET B 08.8 STN 012
 LAT 49-490N DAY 20 NO.DPTH 14 WND-DIR 340 HW-CODE 45
 LON 142-400W HR 15.2 W-COLOR WND-SPD 05 CLD-TPE
 MARSD SQ 159 C/I 1802 W-TRNSP BARO 995.0 CLD-AMT 9 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
152	0000	077	8	32540	2541	14786
152	0010	0770		32535	2541	14787
152	0020	0769		32536	2541	14788
152	0030	0751		32539	2544	14783
152	0050	0605		32554	2564	14729
152	0074	0570		32553	2568	14718
152	0099	0532		32592	2576	14707
152	0124	0467		33060	2620	14691
152	0148	0434		33467	2656	14687
152	0173	0426		33685	2674	14690
152	0198	0408		33744	2680	14688
152	0247	0388		33809	2687	14688
152	0297	0370		33878	2695	14690
152	0397	0355		34010	2707	14702

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	0770	B	32540	2541	14786	0000	00000	2577
0010	0770		32535	2541	14787	0026	00001	2583
0020	0769		32536	2541	14788	0052	00005	2582
0030	0751		32539	2544	14783	0078	00012	2557
0050	0605		32554	2564	14729	0127	00032	2365
0075	0569		32550	2568	14718	0186	00070	2328
0100	0529		32607	2577	14707	0244	00121	2244
0125	0465		33079	2621	14691	0295	00180	1823
0150	0433		33491	2658	14687	0337	00238	1482
0175	0425		33693	2674	14690	0372	00297	1325
0200	0407		33747	2681	14687	0405	00359	1268
0225	0396		33784	2685	14687	0436	00428	1231
0250	0387		33813	2688	14688	0467	00503	1202
0300	0370		33881	2695	14690	0526	00669	1139
0400	0355		34014	2707	14702	0635	01060	1031

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 2383 AIR T 13.3 VIS 7
 CONS. NO 013 MONTH 5 MXSAMPD 42 WAVES 2 2703 WET B 10.5 STN 201
 LAT 49-590N DAY 21 NO.DPTH 26 WND-DIR 250 WW-CODE 51
 LON 145-010W HR 19.2 W-COLOR 10 WND-SPD 04 CLD-TPE 6
 MARSD SQ 159 C/I 1802 W-TRNSP 14 BARO CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
192	0000	073	B	32517	711	2545	14770
192	0010	0723		32522	713	2546	14769
192	0020	0715		32548	719	2549	14768
192	0029	0710		32554	716	2550	14767
192	0049	0537		32583	730	2574	14701
192	0073	0523		32584	727	2576	14699
192	0097	0489		32607	723	2582	14690
192	0121	0464		33137	540	2626	14690
192	0146	0466		33546	397	2658	14701
192	0170	0442		33705	320	2674	14697
192	0194	0400		33749	273	2681	14684
192	0243	0390		33805	197	2687	14688
192	0292	0379		33880	156	2694	14693
192	0392	0356		33982	105	2704	14701
192	0491	0367		34116	072	2714	14724
192	0591	0340		34183	065	2722	14730
229	0800	0312		34329	047	2736	14754
229	1000	0281	B	34389	059	2744	14775
229	1200	0256	B	34447	067	2750	14799
229	1500	0226	B	34536	080	2760	14837
229	2000	0191		34595	139	2768	14908
229	2500	0171		34633	208	2772	14985
229	3000	0157		34658	260	2775	15066
229	3500	0153		34670	299	2776	15151
229	4000	0151		34675	355	2777	15239
229	4200	0152	B				

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA			
0000	0730	B	32517	711	2545	14770	0000	00000	2541		
0010	0723		32522	713	2546	14769	0026	00001	2530		
0020	0715		32548	719	2549	14767	0051	00005	2502		
0030	0702	B	32555	717	2551	14764	0076	00012	2481		
0050	0535		32583	730	2575	14700	0124	00031	2263		
0075	0520		3258	B	730	2576	14698	0180	00067	2255	
0100	0485		3266	D	704	B	2586	14689	0236	00117	2154
0125	0464		33216		513		2632	14692	0285	00173	1719
0150	0464		33584		381		2662	14701	0325	00228	1444
0175	0433		33719		309		2676	14694	0359	00286	1313

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0200	0396	33757	262	2682	14683	0392	00348	1250
0225	0388 B	33786	221	2686	14684	0423	00416	1222
0250	0388	33816	190	2688	14689	0453	00491	1202
0300	0377	33889	151	2695	14693	0512	00657	1139
0400	0357	33993	102	2705	14703	0623	01051	1048
0500	0365	34123	071	2715	14724	0724	01520	0967
0600	0338	34190	064	2723	14731	0819	02051	0897
0700	0323	3426 B	054	2730	14742	0906	02634	0833
0800	0312	34329	047	2736	14754	0988	03261	0780
1000	0281 B	34389	059	2744	14775	1139	04655	0715
1200	0256 B	34447	067	2750	14799	1278	06222	0656
1500	0226 B	34536	080	2760	14837	1465	08801	0572
2000	0191	34595	139	2768	14908	1739	13719	0509
2500	0171	34633	208	2772	14985	1990	19518	0475
3000	0157	34658	260	2775	15066	2227	26239	0454
3500	0153	34670	299	2776	15152	2459	34045	0454
4000	0151	34675	355	2777	15239	2693	43157	0461

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 1651 AIR T 08.7 VIS 7
 CONS. NO 014 MONTH 5 MXSAMPD 42 WAVES 2 0682 WET B 06.9 STN 202
 LAT 50-020N DAY 28 NO.DPTH 26 WND-DIR 160 WW-CODE 02
 LON 145-040W HR 19.2 W-COLOR 40 WND-SPD 03 CLD-TPE 8
 MARSD SQ 195 C/I 1802 W-TRNSP 16 BARO 1018.0 CLD-AMT 5 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
192	0000	086	B	32550	697	2529	14820
192	0010	0840		32536	707	2530	14814
192	0020	0783		32535	720	2539	14794
192	0030	0628		32568	731	2562	14735
192	0050	0559	B	32577	733	2571	14710
192	0075	0535		32581	722	2574	14705
192	0100	0496		32818	634	2597	14696
192	0125	0483		33414	447	2646	14702
192	0150	0483		33638	365	2664	14710
192	0175	0469		33734	308	2673	14709
192	0200	0434		33770	280	2680	14699
192	0250	0400	B	33826	196	2688	14694
192	0300	0379		33892	145	2695	14694
192	0400	0371		34054	098	2709	14709
192	0500	0368		34147	069	2716	14726
192	0600	0350		34213	064	2723	14736
206	0795	0315		34319	053	2735	14755
206	0993	0284	B	34386	061	2743	14775
206	1192	0260		34437	065	2749	14799
206	1490	0231		34505	068	2757	14837
206	1987	0194	B	34591	137	2767	14907
206	2484	0172		34630	200	2772	14983
206	2982	0158		34656	259	2775	15063
206	3479	0153		34673	299	2777	15148
206	3977	0151		34672	326	2777	15234
206	4176	0151		34681	328	2778	15270

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA	
0000	0860	B	32550	697	2529	14820	0000	00000	2695
0010	0840		32536	707	2530	14814	0027	00001	2679
0020	0783		32535	720	2539	14794	0054	00005	2602
0030	0628		32568	731	2562	14735	0079	00012	2379
0050	0559	B	32577	733	2571	14710	0126	00031	2294
0075	0535		32581	722	2574	14705	0183	00068	2267
0100	0496		32818	634	2597	14696	0237	00116	2049
0125	0483		33414	447	2646	14702	0283	00168	1591
0150	0483		33638	365	2664	14710	0321	00222	1425
0175	0469		33734	308	2673	14709	0356	00280	1341

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0200	0434	33770	280	2680	14699	0389	00343	1279
0225	0413	33799	238	2684	14695	0421	00412	1238
0250	0400 B	33826	196	2688	14694	0452	00487	1206
0300	0379	33892	145	2695	14694	0511	00654	1139
0400	0371	34054	098	2709	14709	0620	01042	1018
0500	0368	34147	069	2716	14726	0719	01500	0953
0600	0350	34213	064 B	2723	14736	0812	02026	0892
0700	0332	34272	057 B	2730	14745	0900	02608	0837
0800	0314	34321	053 B	2735	14755	0982	03241	0788
1000	0283 B	34388	061	2743	14776	1134	04645	0718
1200	0259	34439	065	2750	14800	1274	06226	0665
1500	0230	34507	069	2757	14839	1466	08884	0598
2000	0193 B	34592	139	2767	14909	1749	13928	0514
2500	0171	34631	202	2772	14985	2001	19764	0477
3000	0158	34657	261	2775	15066	2239	26512	0455
3500	0153	34673	301	2777	15152	2471	34312	0451
4000	0151	34677	325	2777	15239	2704	43390	0459

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 2355 AIR T 08.4 VIS 7
 CONS. NO 015 MONTH 6 MXSAMPD 42 WAVES 2 2555 WET B 07.4 STN 203
 LAT 50-050N DAY 03 NO.DPTH 27 WND-DIR 220 WW-CODE 02
 LON 145-000W HR 21.6 W-COLOR 10 WND-SPD 07 CLD-TPE 3
 MARSD SQ 195 C/I 1802 W-TRNSP 16 BARO 1015.0 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
216	0000	084	B	32528	697	2530	14812
216	0010	0819		32528	703	2533	14806
216	0020	0810		32524	710	2534	14804
216	0029	0793		32529	694	2537	14799
216	0049	0589		32574	733	2567	14722
216	0073	0553		32591	718	2573	14712
216	0097	0520		32623	699	2579	14703
216	0122	0474		33270	496	2636	14696
216	0146	0469		33654	358	2667	14703
216	0171	0452		33726	308	2674	14701
216	0195	0420		33781	265	2682	14693
216	0244	0389	B	33838	181	2690	14688
216	0293	0381		33904	144	2696	14694
216	0392	0375		34032	090	2706	14710
216	0491	0369		34139	065	2716	14725
216	0591	0351		34210	060	2723	14735
230	0796	0315		34325	052	2735	14755
230	0995	0288	C	34399	050	2744	14778
230	1194	0259	B	34454	064	2751	14799
230	1493	0227		34509	091	2758	14836
230	1992	0190		34595	145	2768	14906
230	2490	0171		34633	209	2772	14983
230	2990	0157		34658	265	2775	15064
230	3490	0152		34670	302	2777	15149
230	3990	0150		34675	330	2777	15236
230	4090	0152		34675	319	2777	15255
230	4190	0151	B				

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA			
0000	0840	B	32528	697	2530	14812	0000	00000	2683		
0010	0819		32528	703	2533	14806	0027	00001	2655		
0020	0810		32524	710	2534	14804	0054	00005	2647		
0030	0784	B	32531	695	2538	14796	0080	00012	2607		
0050	0585		32575	733	2568	14721	0130	00032	2326		
0075	0550		3258	C	720	2573	14711	0188	00069	2283	
0100	0514		3269	E	678	B	2585	14701	0244	00119	2164
0125	0473		33333		475		2641	14697	0291	00174	1641
0150	0467		3368	C	347		2669	14704	0329	00227	1379

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0175	0447	33736	301	2676	14700	0363	00284	1315
0200	0415	33788	255	2683	14692	0396	00346	1246
0225	0397 B	33820	210	2687	14688	0427	00413	1205
0250	0387 B	33846	175	2690	14689	0457	00486	1178
0300	0380	33914	139	2696	14695	0515	00650	1124
0400	0375	34042	087	2707	14711	0623	01038	1031
0500	0368	34146	064	2716	14726	0724	01499	0953
0600	0349	34216	060	2724	14735	0817	02024	0889
0700	0331	34276	055	2730	14745	0904	02604	0833
0800	0314	34327	052	2736	14755	0985	03234	0784
1000	0287 C	34401	050	2744	14778	1137	04629	0713
1200	0258 B	34455	064	2751	14800	1275	06189	0652
1500	0226	34510	092	2758	14837	1464	08807	0591
2000	0190	34596	146	2768	14907	1743	13788	0507
2500	0171	34634	210	2772	14985	1993	19568	0474
3000	0157	34658	266	2775	15066	2230	26280	0453
3500	0152	34670	303	2777	15151	2461	34065	0452
4000	0150	34675	324	2777	15239	2695	43148	0460

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 0462 AIR T 08.9 VIS 7
 CONS. NO 016 MONTH 6 MXSAMPD 42 WAVES 2 0083 WET B 08.0 STN 204
 LAT 50-000N DAY 12 NO.DPTH 27 WND-DIR 040 WW-CODE 02
 LON 144-570W HR 20.9 W-COLOR 10 WND-SPD 06 CLD-TPE 6
 MARSD SQ 195 C/I 1802 W-TRNSP 17 BARO 1014.5 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
209	0000	085	B	32617	689	2535	14817
209	0010	0842		32541	697	2531	14815
209	0020	0825		32538	694	2533	14810
209	0030	0823		32534	693	2533	14811
209	0050	0539	B	32586	715	2574	14702
209	0075	0484		32636	723	2584	14684
209	0100	0434		32774	682	2601	14669
209	0125	0438		33168	522	2631	14680
209	0150	0429		33524	388	2661	14686
209	0175	0466		33735	303	2673	14708
209	0200	0432		33755	278	2679	14698
209	0250	0402	B	33810	208	2686	14694
209	0300	0384		33877	158	2693	14696
209	0400	0373		34004	096	2704	14710
209	0500	0368		34134	067	2715	14726
209	0600	0351		34211	061	2723	14736
‡248	0800	0317		34333	045	2736	14757
‡248	1000	0286	C	34402	050	2744	14778
‡248	1200	0258		34457	054	2751	14800
‡248	1500	0230		34494	076	2756	14839
‡248	2000	0192		34590	139	2767	14908
‡248	2500	0171		34633	200	2772	14985
‡248	3000	0158		34657	258	2775	15066
‡248	3500	0152		34672	291	2777	15151
‡248	4000	0151		34680	321	2777	15239
‡248	4100	0152		34678	316	2777	15257
‡248	4200	0152	B	34683	325	2778	15275

#MULTIPLE CAST CONTINUED NEXT DAY

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA	
0000	0850	B	32617	689	2535	14817	0000	00000	2631
0010	0842		32541	697	2531	14815	0027	00001	2678
0020	0825		32538	694	2533	14810	0054	00006	2658
0030	0823		32534	693	2533	14811	0080	00012	2659
0050	0539	B	32586	715	2574	14702	0130	00032	2265
0075	0484		32636	723	2584	14684	0186	00068	2171
0100	0434		32774	682	2601	14669	0238	00115	2018
0125	0438		33168	522	2631	14680	0286	00169	1728

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0150	0429	33524	388	2661	14686	0326	00225	1454
0175	0466	33735	303	2673	14708	0361	00283	1337
0200	0432	33755	278	2679	14698	0394	00347	1288
0225	0413 B	33781	243	2683	14695	0426	00417	1251
0250	0402 B	33810	208	2686	14694	0457	00493	1220
0300	0384	33877	158	2693	14696	0517	00661	1155
0400	0373	34004	096	2704	14710	0629	01060	1057
0500	0368	34134	067	2715	14726	0730	01529	0962
0600	0351	34211	061	2723	14736	0824	02058	0895
0700	0334	34278	052	2730	14746	0912	02640	0834
0800	0317	34333	045	2736	14757	0993	03269	0782
1000	0286 C	34402	050	2744	14778	1144	04661	0710
1200	0258	34457	054	2751	14800	1282	06217	0651
1500	0230	34494	076	2756	14839	1474	08869	0608
2000	0192	34590	139	2767	14908	1759	13952	0514
2500	0171	34633	200	2772	14985	2011	19776	0475
3000	0158	34657	258	2775	15066	2248	26514	0456
3500	0152	34672	291	2777	15151	2480	34309	0451
4000	0151	34680	321	2777	15239	2713	43357	0457

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 1662 AIR T 09.1 VIS 7
 CONS. NO 017 MONTH 6 MXSAMPD 42 WAVES 2 2292 WET B 08.1 STN 205
 LAT 49-590N DAY 17 NO.DPTH 26 WND-DIR 160 WW-CODE 02
 LON 145-020W HR 19.2 W-COLOR 10 WND-SPD 04 CLD-TPE 6
 MARSD SQ 159 C/I 1802 W-TRNSP 16 BARO 1008.9 CLD-AMT 6 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
192	0000	091	B	32527	682	2519	14839
192	0010	0894		32522	688	2521	14834
192	0020	0879		32518	684	2523	14830
192	0030	0847		32520	693	2528	14820
192	0050	0555	B	32576	738	2572	14709
192	0075	0500		32621	719	2581	14691
192	0100	0460		32739	667	2595	14680
192	0125	0463		33301	483	2639	14693
192	0150	0458		33565	384	2661	14698
192	0175	0449	B	33733	305	2675	14701
192	0200	0434		33778	266	2680	14699
192	0250	0401		33844	180	2689	14695
192	0300	0381		33913	145	2696	14695
192	0400	0372		34032	102	2707	14710
192	0500	0369		34124	075	2714	14726
192	0600	0349		34190	069	2722	14735
209	0800	0319		34319	050	2735	14757
209	1000	0290	C	34385	056	2743	14779
209	1200	0259	B	34454	064	2751	14800
209	1500	0225		34518	093	2759	14837
209	2000	0189	B	34597	147	2768	14907
209	2500	0171			213		
209	3000	0157			260		
209	3500	0151			298		
209	4000	0151					
209	4200	0153	B				

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA	
0000	0910	B	32527	682	2519	14839	0000	00000	2786
0010	0894		32522	688	2521	14834	0028	00001	2767
0020	0879		32518	684	2523	14830	0056	00006	2750
0030	0847		32520	693	2528	14820	0083	00013	2704
0050	0555	B	32576	738	2572	14709	0133	00033	2291
0075	0500		32621	719	2581	14691	0190	00069	2199
0100	0460		32739	667	2595	14680	0244	00117	2071
0125	0463		33301	483	2639	14693	0290	00170	1654
0150	0458		33565	384	2661	14698	0330	00225	1453
0175	0449	B	33733	305	2675	14701	0365	00283	1320

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0200	0434	33778	266	2680	14699	0397	00346	1273
0225	0417	33813	220	2685	14697	0429	00415	1231
0250	0401	33844	180	2689	14695	0459	00489	1193
0300	0381	33913	145	2696	14695	0518	00654	1125
0400	0372	34032	102	2707	14710	0627	01044	1035
0500	0369	34124	075	2714	14726	0728	01510	0971
0600	0349	34190	069	2722	14735	0823	02046	0908
0700	0333	34259	059	2729	14746	0912	02637	0848
0800	0319	34319	050	2735	14757	0995	03276	0795
1000	0290 C	34385	056	2743	14779	1149	04696	0727
1200	0259 B	34454	064	2751	14800	1289	06274	0654
1500	0225	34518	093	2759	14837	1477	08878	0584
2000	0189 B	34597	147	2768	14907	1754	13822	0505
2500	0171		213					
3000	0157		260					
3500	0151		298					
4000	0151							

C-REF-NO 005 YR 1968 DEPTH C 4279 WAVES 1 1852 AIR T 09.9 VIS 7
 CONS. NO 018 MONTH 6 MXSAMPD 42 WAVES 2 2794 WET B 09.2 STN 206
 LAT 50-010N DAY 24 NO.DPTH 26 WND-DIR 180 WW-CODE 02
 LON 145-000W HR 19.2 W-COLOR WND-SPD 08 CLD-TPE 8
 MARSID SQ 195 C/I 1802 W-TRNSP BARO 1009.0 CLD-AMT 4 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	
192	0000	096	B	32499	665	2509	14857
192	0010	0932		32510	669	2514	14849
192	0020	0930	B	32499	668	2514	14849
192	0030	0911		32492	676	2516	14844
192	0050	0545		32574	726	2573	14705
192	0075	0499		32594	719	2579	14690
192	0100	0461		32639	715	2587	14679
192	0125	0436		32784	658	2601	14674
192	0150	0449		33277	481	2639	14691
192	0175	0468		33613	364	2663	14707
192	0200	0443		33716	312	2674	14702
192	0250	0410	B	33781	233	2683	14697
192	0300	0393		33876	160	2692	14700
192	0400	0377		34010	100	2704	14711
192	0500	0372		34111	076	2713	14727
192	0600	0356		34190	061	2721	14738
210	0800	0316	B	34314	054	2735	14756
210	1000	0287		34382	069	2743	14778
210	1200	0262	B	34448	067	2750	14801
210	1500	0230		34500	088	2757	14839
210	2000	0193	B	34591	141	2767	14909
210	2500	0172		34632	210	2772	14986
210	3000	0157		34660	266	2775	15066
210	3500	0153		34670	304	2776	15151
210	4000	0151		34682	325	2778	15239
210	4200	0153		34683	331	2778	15275

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA	
0000	0960	B	32499	665	2509	14857	0000	00000	2882
0010	0932		32510	669	2514	14849	0029	00001	2833
0020	0930	B	32499	668	2514	14849	0057	00006	2840
0030	0911		32492	676	2516	14844	0086	00013	2818
0050	0545		32574	726	2573	14704	0137	00034	2281
0075	0499		32594	719	2579	14690	0194	00070	2218
0100	0461		32639	715	2587	14679	0249	00119	2147
0125	0436		32784	658	2601	14674	0301	00179	2014
0150	0449		33277	481	2639	14691	0347	00244	1660
0175	0468		33613	364	2663	14707	0386	00308	1430

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0200	0443	33716	312	2674	14702	0421	00375	1329
0225	0424	3376 C	270	2680	14699	0454	00447	1279
0250	0410 B	33781	233	2683	14697	0486	00525	1250
0300	0393	33876	160	2692	14700	0547	00696	1165
0400	0377	34010	100	2704	14711	0659	01096	1057
0500	0372	34111	076	2713	14727	0762	01571	0984
0600	0356	34190	061	2721	14738	0858	02111	0916
0700	0336	34258	054	2728	14747	0947	02706	0851
0800	0316 B	34314	054	2735	14756	1030	03347	0795
1000	0287	34382	069	2743	14778	1184	04766	0726
1200	0262 B	34448	067	2750	14801	1325	06352	0662
1500	0230	34500	088	2757	14839	1517	09015	0603
2000	0193 B	34591	141	2767	14909	1801	14082	0515
2500	0172	34632	210	2772	14986	2054	19922	0477
3000	0157	34660	266	2775	15066	2291	26645	0452
3500	0153	34670	304	2776	15152	2522	34440	0454
4000	0151	34682	325	2778	15239	2755	43500	0456

C-REF-NO 005 YR 1968 DEPTH C 3909 WAVES 1 0954 AIR T 10.9 VIS 1
 CONS. NO 019 MONTH 7 MXSAMPD 04 WAVES 2 0963 WET B 10.5 STN 012
 LAT 49-490N DAY 01 NO.DPTH 14 WND-DIR 090 WW-CODE
 LON 142-400W HR 06.6 W-COLOR WND-SPD 12 CLD-TPE
 MARSD SQ 159 C/I 1802 W-TRNSP BARO 1014.2 CLD-AMT 9 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
066	0000	103	B	32453	2494	14882
066	0010	1007		32448	2497	14875
066	0020	0991		32474	2502	14872
066	0029	0983		32467	2503	14870
066	0049	0843		32491	2526	14821
066	0073	0577		32547	2567	14721
066	0097	0536		32605	2576	14709
066	0122	0456		33246	2636	14688
066	0146	0433		33483	2657	14686
066	0171	0413		33583	2667	14683
066	0195	0394		33699	2678	14681
066	0244	0379	B	33804	2688	14684
066	0293	0373		33880	2695	14690
066	0393	0365		34026	2707	14705

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1030	B	32453	2494	14882	0000	00000	3027
0010	1007		32448	2497	14875	0030	00002	2996
0020	0991		32474	2502	14872	0060	00006	2953
0030	0979		32467	2503	14869	0090	00014	2941
0050	0831		32493	2528	14817	0147	00037	2704
0075	0570	B	3254	2567	14718	0210	00077	2336
0100	0526		3268	F	2583	14706	0267	00128
0125	0452		3329	B	2640	14688	0315	00183
0150	0430		3350	B	2659	14686	0355	00238
0175	0410		33603		2669	14683	0390	00297
0200	0392		33714		2680	14681	0424	00362
0225	0382	B	3378	B	2685	14682	0455	00430
0250	0378	B	33814		2689	14684	0486	00504
0300	0370	B	3390	B	2696	14690	0544	00669
0400	0365		34034		2708	14707	0653	01057

C-REF-NO 005 YR 1968 DEPTH C 3774 WAVES 1 1052 AIR T 12.7 VIS 8
 CONS. NO 020 MONTH 7 MXSAMPD 35 WAVES 2 1765 WET B 11.1 STN 009
 LAT 49-260N DAY 02 NO.DPTH 24 WND-DIR 100 WND-SPD 08 CLD-TPE 0
 LON 136-400W HR 02.6 W-COLOR WND-SPD 08 CLD-TPE 0
 MARSD SQ 158 C/I 1802 W-TRNSP 17 BARO 1022.0 CLD-AMT 2 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
026	0000	109 B	32453		2483	14904
026	0010	1078	32443		2485	14901
026	0020	1050	32467		2491	14893
026	0030	1010	32429		2495	14880
026	0050	0741 B	32508		2542	14782
026	0074	0616	32536		2561	14737
026	0099	0595	32548		2565	14733
026	0123	0540	32826		2593	14718
026	0148	0497	33419		2645	14712
026	0173	0492	33669		2665	14717
026	0198	0458	33754		2676	14709
026	0247	0415	33811		2685	14699
026	0297	0391	33864		2691	14698
026	0396	0391	34004		2703	14717
026	0496	0370	34099		2712	14725
026	0596	0356				
035	0800	0327 B	34305		2733	14760
035	1000	0301 C	34403		2743	14784
035	1200	0274 B	34450		2749	14806
035	1500	0230	34511		2758	14839
035	2000	0191	34589		2767	14908
035	2500	0171	34639		2773	14985
035	3000	0157	34661		2775	15066
035	3500	0156	34684		2777	15153

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1090 B	32453		2483	14904	0000	00000	3125
0010	1078	32443		2485	14901	0031	00002	3115
0020	1050	32467		2491	14893	0062	00006	3053
0030	1010	32429		2495	14880	0093	00014	3018
0050	0741 B	32508		2542	14782	0149	00037	2570
0075	0614	32534		2561	14736	0212	00076	2394
0100	0593	32554		2565	14732	0271	00130	2356
0125	0536	3287 C		2597	14717	0327	00194	2053
0150	0496	33448		2647	14713	0373	00257	1582
0175	0490	33680		2666	14717	0410	00320	1404
0200	0456	33758		2676	14708	0444	00386	1311
0225	0431	3380 B		2682	14702	0477	00456	1260

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0250	0413	33814		2685	14699	0508	00533	1228
0300	0391	33868		2692	14699	0569	00703	1169
0400	0390	34008		2703	14717	0682	01107	1072
0500	0369	34102		2713	14726	0786	01585	0988
0600	0355	34180		2720	14738	0882	02129	0922
0700	0341	34248		2727	14749	0972	02731	0864
0800	0327 B	34305		2733	14760	1057	03384	0814
1000	0301 C	34403		2743	14784	1213	04818	0726
1200	0274 B	34450		2749	14806	1355	06418	0674
1500	0230	34511		2758	14839	1548	09085	0595
2000	0191	34589		2767	14908	1830	14115	0514
2500	0171	34639		2773	14985	2080	19908	0470
3000	0157	34661		2775	15066	2315	26583	0451
3500	0156	34684		2777	15153	2545	34321	0448

C-REF-NO 005 YR 1968 DEPTH C 3549 WAVES 1 1062 AIR T 11.6 VIS 8
 CONS. NO 021 MONTH 7 MXSAMPD 04 WAVES 2 1684 WET B 08.9 STN 008
 LAT 49-170N DAY 02 NO.DPTH 14 WND-DIR 110 WW-CODE 03
 LON 134-400W HR 10.3 W-COLOR WND-SPD 05 CLD-TPE 8
 MARSD SQ 158 C/I 1802 W-TRNSP BARO 1021.4 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	T E M P	S A L	OXYGEN	SGMT	SOUND
103	0000	113	B			
103	0010	1097	32450		2482	14908
103	0020	1042	32443		2491	14890
103	0030	1026	32444		2494	14886
103	0050	0686	32523		2551	14761
103	0075	0620	32514		2559	14738
103	0100	0600	32542		2564	14735
103	0125	0559	B	32730	2583	14725
103	0150	0518	33248		2629	14719
103	0175	0536	33660		2659	14736
103	0200	0538	33798		2670	14743
103	0250	0471	33806		2678	14723
103	0300	0428	33839		2686	14714
103	0400	0381	33933		2698	14712

I N T E R P O L A T E D

DEPTH	T E M P	S A L	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA	
0000	1130	B	3248	C	2478	14918	0000	00000	3173
0010	1097		32450		2482	14908	0032	00002	3141
0020	1042		32443		2491	14890	0063	00006	3057
0030	1026		32444		2494	14886	0094	00014	3033
0050	0686		32523		2551	14761	0149	00036	2487
0075	0620		32514		2559	14738	0211	00076	2415
0100	0600		32542		2564	14735	0271	00130	2373
0125	0559	B	32730		2583	14725	0328	00196	2188
0150	0518		33248		2629	14719	0378	00265	1756
0175	0536		33660		2659	14736	0419	00332	1471
0200	0538		33798		2670	14743	0455	00401	1373
0225	0509	C	3382	E	2675	14735	0489	00475	1324
0250	0471		33806		2678	14723	0522	00556	1296
0300	0428		33839		2686	14714	0585	00735	1230
0400	0381		33933		2698	14712	0704	01158	1118

C-REF-NO 005 YR 1968 DEPTH C 3275 WAVES 1 0471 AIR T 16.1 VIS 9
 CONS. NO 022 MONTH 7 MXSAMPD 04 WAVES 2 0882 WET B 13.3 STN 007
 LAT 49-100N DAY 02 NO.DPTH 14 WND-DIR 040 W-W-CODE 03
 LON 132-400W HR 16.5 W-COLOR 10 WND-SPD 03 CLD-TPE 8
 MARSD SQ 158 C/I 1802 W-TRNSP 18 BARO 1020.0 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
165	0000	118	B	32387	2462	14935
165	0010	1173		32394	2464	14934
165	0020	1139		32398	2470	14924
165	0030	0993		32459	2500	14874
165	0050	0685		32512	2550	14760
165	0075	0626		32616	2566	14742
165	0100	0618		32845	2585	14746
165	0125	0653		33162	2606	14768
165	0150	0664		33528	2633	14782
165	0175	0653		33726	2650	14784
165	0200	0620		33804	2660	14776
165	0250	0551		33858	2673	14757
165	0300	0520		33922	2682	14753
165	0400	0463		33993	2694	14747

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1180	B	32387	2462	14935	0000	00000	3328
0010	1173		32394	2464	14934	0033	00002	3313
0020	1139		32398	2470	14924	0066	00007	3253
0030	0993		32459	2500	14874	0098	00015	2969
0050	0685		32512	2550	14760	0153	00037	2494
0075	0626		32616	2566	14742	0214	00076	2346
0100	0618		32845	2585	14746	0270	00126	2169
0125	0653		33162	2606	14768	0323	00186	1978
0150	0664		33528	2633	14781	0369	00251	1723
0175	0653		33726	2650	14784	0411	00320	1565
0200	0620		33804	2660	14776	0449	00394	1468
0225	0583		3384 B	2668	14766	0485	00472	1400
0250	0551		33858	2673	14757	0520	00557	1350
0300	0520		33922	2682	14753	0586	00743	1271
0400	0463		33993	2694	14747	0708	01181	1163

C-REF-NO 005 YR 1968 DEPTH C 2929 WAVES 1 2652 AIR T 13.7 VIS 7
 CONS. NO 023 MONTH 7 MXSAMPD 15 WAVES 2 0482 WET B 12.3 STN 006
 LAT 49-020N DAY 02 NO.DPTH 20 WND-DIR 260 WW-CODE 03
 LON 130-400W HR 22.8 W-COLOR 20 WND-SPD 05 CLD-TPE 6
 MARSD SQ 158 C/I 1802 W-TRNSP 14 BARO 1019.2 CLD-AMT 8 HW

O B S E R V E D

GMT	DEPTH	T E M P	S A L	OXYGEN	SGMT	SOUND
228	0000	137	B	32156	2408	14997
228	0010	1270		32160	2428	14965
228	0020	1261		32165	2430	14963
228	0030	1213		32265	2446	14950
228	0050	0836	B	32428	2523	14818
228	0074	0720		32828	2570	14782
228	0099	0719		33259	2604	14791
228	0124	0729		33637	2633	14804
228	0148	0714		33802	2648	14805
228	0173	0703		33855	2653	14805
228	0198	0677	B	33888	2660	14799
228	0248	0626		33947	2671	14788
228	0297	0574		33978	2680	14776
228	0397	0517		34024	2690	14769
234	0500	0463		34077	2701	14765
234	0600	0431		34162	2711	14769
234	0800	0380	B	34294	2727	14783
234	1000	0327	B	34374	2738	14795
234	1200	0286	B	34432	2747	14811
234	1500	0242		34516	2757	14844

I N T E R P O L A T E D

DEPTH	T E M P	S A L	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1370	B	32156	2408	14997	0000	00000	3848
0010	1270		32160	2428	14965	0038	00002	3659
0020	1261		32165	2430	14963	0074	00008	3641
0030	1213		32265	2446	14950	0110	00017	3483
0050	0836	B	32428	2523	14818	0173	00042	2760
0075	0719		32846	2572	14782	0237	00082	2292
0100	0720		33277	2606	14792	0290	00129	1976
0125	0729		33647	2634	14804	0337	00182	1716
0150	0713		33809	2648	14805	0378	00241	1579
0175	0701		33858	2654	14805	0417	00306	1530
0200	0675	B	33891	2660	14799	0455	00379	1474
0225	0650		33922	2666	14793	0492	00458	1421
0250	0624		33949	2671	14787	0527	00544	1372
0300	0572		33980	2680	14775	0594	00733	1290
0400	0515		34025	2691	14769	0720	01182	1199
0500	0463		34077	2701	14765	0836	01719	1110

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0600	0431	34162		2711	14769	0944	02324	1019
0700	0405	34234		2719	14776	1043	02985	0944
0800	0380	B 34294		2727	14783	1135	03695	0881
1000	0327	B 34374		2738	14795	1303	05238	0777
1200	0286	B 34432		2747	14811	1453	06924	0700
1500	0242	34516		2757	14844	1651	09664	0605

C-REF-NO 005 YR 1968 DEPTH C 2529 WAVES 1 3151 AIR T 13.8 VIS 7
 CONS. NO 024 MONTH 7 MXSAMPD 04 WAVES 2 0071 WET B 12.7 STN 005
 LAT 48-510N DAY 03 NO.DPTH 14 WND-DIR 310 WW-CODE 01
 LON 128-400W HR 05.5 W-COLOR WND-SPD 06 CLD-TPE 3
 MARSD SQ 157 C/I 1802 W-TRNSP BARO 1018.5 CLD-AMT 7 HW

O B S E R V E D

GMT	DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND
055	0000	134	B	32153	2413	14987
055	0010	1326		32134	2415	14983
055	0020	1307		32239	2426	14980
055	0030	1296		32280	2432	14978
055	0049	0900		32406	2511	14842
055	0074	0779		32447	2532	14800
055	0098	0759		32987	2578	14803
055	0123	0762	B	33374	2607	14814
055	0147	0730		33640	2633	14809
055	0172	0686		33773	2649	14797
055	0196	0657	B	33808	2656	14790
055	0246	0604		33863	2667	14778
055	0294	0552		33891	2676	14765
055	0394	0529		34040	2690	14774

I N T E R P O L A T E D

DEPTH	TEMP	SAL	OXYGEN	SGMT	SOUND	DELTA-D	POT. EN	SVA
0000	1340	B	32153	2413	14987	0000	00000	3793
0010	1326		32134	2415	14983	0038	00002	3782
0020	1307		32239	2426	14980	0076	00008	3672
0030	1296		32280	2432	14978	0112	00017	3623
0050	0890		3240 B	2513	14838	0177	00043	2856
0075	0777		3247 B	2534	14800	0247	00087	2653
0100	0759		33023	2580	14804	0308	00141	2218
0125	0760	B	33401	2610	14813	0360	00201	1942
0150	0725		33662	2635	14807	0406	00266	1703
0175	0682		33780	2650	14796	0447	00334	1562
0200	0653	B	33813	2657	14789	0486	00408	1503
0225	0626		33843	2663	14783	0523	00489	1450
0250	0599		33865	2668	14776	0559	00577	1403
0300	0555	C	3391 C	2677	14768	0628	00770	1321
0400	0529		34049	2691	14775	0755	01224	1198

SECTION IV

Bathythermograms

EXPLANATION OF DATA HEADINGS IN TABLES 1 AND 2

CON No:	The consecutive BT slide number.	
LAT:	Deg	Position of platform at time of BT lowering.
	Min	
LONG:		
DATE:	Day	Day
	Mon	Month
	Yr	Year
GMT:	Hrs	The Greenwich Mean Time at which the BT lowering was made.
	Min	
DEPTH: Metres	Depth to bottom in metres, as read from U.S. Coast and Geodetic Survey Chart 8500.	
BAR: Mbs	Barometric pressure; prefix all listed values by 10 or by 9 if a minus (-) sign is present to obtain the pressure in whole millibars.	
	eg. 02 = 1002 mbs 17 = 1017 mbs -98 = 998 mbs -86 = 986 mbs	
WW Code:	Refer to Table 7, Section II	
WIND Amt:	Wind speed in meters per second	
W-1:	P	
	H	
W-2:	Waves 1 and 2. Refer to Tables 4&5, Section II	
CLOUD: T	Refer to Tables 8&9, Section II	
	A	

CCGS "VANCOUVER" 02-68-005

BATHYTHERMOGRAMS

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
001	50	00	145	02	21	05	68	03	00	4221	-98	50	13	22	23	6	8		
002	49	59	145	05	21	05	68	06	00	4221	-98	61	13	52	91	7	8		
003	50	02	145	02	21	05	68	09	00	4221	-98	61	12	52		7	8		
004	50	01	145	01	21	05	68	12	00	4221	-98	10	13	42		7	8		
005	50	03	145	00	21	05	68	15	00	4221	-98	61	14	42	02	7	8		
006	49	59	145	01	21	05	68	18	00	4221	-99	61	10	52	83	7	8		
007	50	02	145	01	21	05	68	21	00	4221	-99	51	08	51	83	6	7		
008	49	59	144	59	22	05	68	00	00	4221	-99	02	10	51	72	7	8		
009	49	59	144	57	22	05	68	03	00	4221	-99	02	13	52	72	7	8		
010	50	01	145	00	22	05	68	06	00	4221	-99	10	10	32	73	7	8		
011	50	01	144	59	22	05	68	09	00	4221	-99	10	09	32	54	7	8		
012	50	02	144	68	22	05	68	12	00	4221	00	10	04	31	73	7	8		
013	50	03	144	56	22	05	68	15	00	4221	00	10	08	21	74	7	8		
014	50	00	145	00	22	05	68	18	00	4221	01	10	10	41	84	7	8		
015	50	02	144	57	22	05	68	21	00	4221	02	02	08	41	93	6	7		
016	50	03	144	58	23	05	68	00	00	4221	03	02	13	31	83	6	7		
017	49	59	144	57	23	05	68	03	00	4221	04	02	16	32	83	7	7		
018	50	00	145	01	23	05	68	06	00	4221	05	02	14	42	04	6	8		
019	50	02	144	58	23	05	68	09	00	4221	05	02	15	42	03	7	8		
020	50	01	145	02	23	05	68	12	00	4221	05	02	18	42	03	6	8		
021	50	01	145	00	23	05	68	15	00	4221	06	15	16	42	04	6	7		
022	50	00	145	03	23	05	68	18	00	4221	06	20	12	42	83	6	8		
023	49	58	145	02	23	05	68	21	00	4221	06	15	14	42	83	6	8		
024	50	03	145	05	24	05	68	00	00	4221	06	02	17	42	82	6	8		
025	50	05	145	00	24	05	68	03	00	4221	06	02	10	52	82	6	7		

TABLE I

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
026	50	00	145	01	24	05	68	06	00	4221	06	02	10	52	82	6	8		
027					24	05	68	09	00	4221	07	51	10	62	XX	7	8		
028	50	01	145	00	24	05	68	12	00	4221	06	61	15	52	XX	7	8		
029	50	04	144	56	24	05	68	15	00	4221	06	02	14	62	82	8	7		
030	49	59	145	02	24	05	68	18	00	4221	08	02	16	52	73	6	7		
031	49	59	145	00	24	05	68	21	00	4221	09	02	16	52	72	6	7		
032	50	02	144	59	25	05	68	00	00	4221	09	02	21	53	62	6	7		
033	49	55	144	55	25	05	68	03	00	4221	10	02	20	53	62	6	7		
034	49	59	145	01	25	05	68	06	00	4221	11	02	21	53	72	6	7		
035	50	00	144	58	25	05	68	09	00	4221	11	02	15	52	72	6	8		
036	50	00	145	00	25	05	68	12	20	4221	12	02	19	52		6	8		
037	49	57	145	00	25	05	68	15	00	4221	13	25	16	52	73	6	7		
038	50	00	145	05	25	05	68	18	00	4221	14	02	13	42	72	6	7		
039	49	58	145	02	25	05	68	21	00	4221	15	01	08	41	62	3	3		
040	49	58	145	04	26	05	68	00	00	4221	16	02	11	41	02	6	7		
041	50	00	145	00	26	05	68	03	00	4221	17	02	08	41	92	6	8		
042	49	58	145	01	26	05	68	06	00	4221	17	02	07	41	92	6	7		
043	50	02	144	59	26	05	68	09	00	4221	17	02	07	31	92	6	8		
044	49	58	145	01	26	05	68	12	00	4221	17	02	08	31	92	6	7		
045	49	58	144	59	26	05	68	15	00	4221	17	02	07	31	82	6	7		
046	50	01	145	01	26	05	68	18	00	4221	18	02	06	21	71	6	7		
047	50	00	145	01	26	05	68	21	00	4221	17	01	03	21	81	8	6		
048	50	02	144	58	27	05	68	00	00	4221	17	02	04	21	72	6	6		
049	49	59	144	58	27	05	68	03	00	4221	16	02	06	21	72	6	8		
050	49	56	145	02	27	05	68	06	00	4221	16	02	03	21	72	6	4		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
051	50	00	145	00	27	05	68	09	00	4221	17	02	10	41			6	7	
052	50	06	144	58	27	05	68	12	00	4221	16	01	09	31	72	6	3		
053	50	03	144	55	27	05	68	15	00	4221	16	02	11	31	72	8	3		
054	49	59	145	02	27	05	68	18	00	4221	17	02	11	31	02	8	3		
055	50	00	145	01	27	05	68	21	00	4221	17	02	10	41	82	8	1		
056	50	02	145	01	28	05	68	00	00	4221	17	02	11	41	82	8	4		
057	50	00	145	01	28	05	68	03	00	4221	17	02	10	41	72	3	5		
058	49	59	145	00	28	05	68	06	00	4221	18	02	07	42	72	3	3		
059	49	58	145	01	28	05	68	09	00	4221	18	02	05	31		8	1		
060	50	01	145	03	28	05	68	12	00	4221	18	02	00	00		3	3		
061	50	02	145	03	28	05	68	15	00	4221	18	02	03	00	92	3	5		
062	50	02	145	04	28	05	68	18	00	4221	19	02	06	30	81	3	7		
063	49	57	145	07	28	05	68	21	00	4221	19	02	09	30	01	8	5		
064	50	03	145	05	29	05	68	00	00	4221	19	15	10	30	01	6	7		
065	49	59	145	01	29	05	68	03	00	4221	19	80	10	41	01	8	5		
066	50	03	145	00	29	05	68	06	00	4221	20	25	08	41	81	9	7		
067	50	00	145	00	29	05	68	09	00	4221	20	01	08	31	81	6	6		
068	50	00	144	58	29	05	68	12	00	4221	20	01	11	41	XX	6	2		
069	50	01	145	00	29	05	68	15	00	4221	20	03	10	41	XX	9	3		
070	50	01	145	00	29	05	68	18	00	4221	20	02	08	31	21	6	6		
071	50	01	145	06	29	05	68	21	00	4221	20	15	11	41	21	8	7		
072	79	59	145	00	30	05	68	00	00	4221	20	80	13	51	91	8	7		
073	50	02	145	01	30	05	68	03	00	4221	20	02	10	51	91	8	2		
074	50	02	145	03	30	05	68	06	00	4221	20	03	07	51	81	8	7		
075	49	51	145	01	30	05	68	09	00	4221	19	25	04	41	XX	9	2		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
076	50	01	145	02	30	05	68	12	00	4221	18	02	09	51	XX	8	3		
077	50	02	145	03	30	05	68	15	00	4221	17	03	09	51	81	9	7		
078	50	01	145	00	30	05	68	18	00	4221	17	61	10	51	81	5	8		
079	50	00	145	03	30	05	68	21	00	4221	15	61	13	41		7	8		
080	50	01	144	59	31	05	68	00	00	4221	12	61	14	41	81	5	8		
081	50	00	145	02	31	05	68	03	00	4221	09	61	24	52	81	7	8		
082	49	59	144	58	31	05	68	06	00	4221	07	61	27	64	82	7	8		
083	50	00	145	04	31	05	68	09	00	4221	05	61	31	65	83	7	8		
084	49	57	145	03	01	06	68	15	00	4221	00	02	30	88	26	6	4		
085	50	00	145	02	01	06	68	18	00	4221	01	02	23	75	05	8	2		
086	49	56	145	04	01	06	68	21	00	4221	02	02	22	74	25	6	6		
087	50	00	145	08	02	06	68	00	00	4221	03	02	21	64	04	8	7		
088	49	58	145	08	02	06	68	03	00	4221	03	02	13	53	04	8	6		
089	50	00	145	03	02	06	68	06	00	4221	04	25	16	54	04	9	7		
090	50	00	145	00	02	06	68	09	00	4221	04	02	22	54	XX	8	7		
091	50	01	144	59	02	06	68	12	00	4221	04	25	22	54	XX	9	7		
092	50	05	144	56	02	06	68	15	00	4221	05	80	23	43	13	9	7		
093	50	02	145	00	02	06	68	18	00	4221	07	15	26	54	03	9	8		
094	50	04	144	58	02	06	68	21	00	4221	08	02	26	54	03	3	7		
095	49	58	145	01	03	06	68	00	30	4221	09	02	28	54	83	6	8		
096	50	03	145	00	03	06	68	03	00	4221	09	02	25	54	83	3	8		
097	50	00	145	01	03	06	68	06	00	4221	10	01	22	54	83	8	8		
098	50	02	145	01	03	06	68	09	00	4221	11	02	23	54	82	6	5		
099	50	00	145	03	03	06	68	12	00	4221	12	02	25	54	82	6	8		
100	50	02	145	02	03	06	68	15	00	4221	12	61	16	53	82	8	8		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH	BAR	WW	WIND	W-1	W-2	CLOUD		
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min	Metres	Mbs	Code	Amt	P	H	P	H	T
101	50	01	145	03	03	06	68	18	00	4221	14	02	15	53	82	3	5	
102	50	05	145	00	03	06	68	21	00	4221	15	02	16	53	82	3	7	
103	50	04	144	58	04	06	68	00	00	4221	15	02	13	52	82	6	8	
104	50	02	145	02	04	06	68	03	00	4221	15	02	10	52	82	6	8	
105	50	04	145	00	04	06	68	06	00	4221	15	20	13	41	82	7	7	
106	50	05	145	00	04	06	68	09	00	4221	15	61	11	41	82	7	8	
107	49	57	145	02	04	06	68	12	00	4221	14	58	17	42	XX	7	8	
108	50	03	145	03	04	06	68	15	00	4221	14	51	13	53	72	7	8	
109	49	58	145	02	04	06	68	18	00	4221	14	47	10	52	02	X	9	
110	50	01	145	01	04	06	68	21	00	4221	15	47	06	51	02	X	9	
111	50	01	144	58	05	06	68	00	00	4221	16	10	08	61	02	6	8	
112	50	00	144	57	05	06	68	03	00	4221	16	10	03	50	91	7	8	
113	50	02	144	57	05	06	68	06	00	4221	16	10	03	50	91	7	8	
114	49	59	145	00	05	06	68	09	00	4221	17	45	08	50	XX	X	9	
115	49	58	144	57	05	06	68	12	00	4221	17	45	08	50	XX	X	9	
116	49	59	144	58	05	06	68	15	00	4221	17	61	07	50	01	X	9	
117	50	00	145	00	05	06	68	18	00	4221	17	47	07	50	01	X	9	
118	50	01	144	59	05	06	68	21	00	4221	18	02	07	50	01	7	8	
119	50	03	144	57	06	06	68	00	00	4221	18	02	06	50	01	6	8	
120	50	04	144	57	06	06	68	03	00	4221	18	02	07	50	01	6	8	
121	49	59	145	03	06	06	68	06	00	4221	18	02	07	50	02	6	7	
122	50	00	144	59	06	06	68	09	00	4221	19	10	09	50	02	6	8	
123	49	58	145	03	06	06	68	12	00	4221	19	02	04	50	02	6	7	
124	49	57	145	01	06	06	68	15	00	4221	19	02	08	50	02	7	8	
125	50	02	145	03	06	06	68	18	00	4221	19	02	10	51	01	6	8	

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
126	49	59	145	04	06	06	68	21	00	4221	19	02	16	51	01	6	8		
127	49	58	144	59	07	06	68	00	00	4221	18	61	21	52	01	7	8		
128	49	58	145	00	07	06	68	03	00	4221	16	20	22	52	01	7	8		
129	49	59	145	02	07	06	68	06	00	4221	14	61	22	53	82	7	8		
130	50	01	144	59	07	06	68	09	00	4221	12	61	30	64	XX	7	8		
131	49	56	144	57	07	06	68	12	00	4221	11	51	25	75	XX	7	8		
132	50	01	144	56	07	06	68	15	00	4221	12	51	17	74	XX	7	8		
133	49	59	145	01	07	06	68	18	00	4221	14	10	22	64	82	7	7		
134	50	01	145	00	07	06	68	21	00	4221	15	02	22	64	82	7	8		
135	50	00	145	05	08	06	68	00	00	4221	16	02	18	64	82	6	2		
136	50	03	145	05	08	06	68	03	00	4221	15	02	19	63	82	6	7		
137	50	00	145	00	08	06	68	06	00	4221	15	20	22	63	82	6	7		
138	50	04	144	58	08	06	68	09	00	4221	15	02	16	52	XX	6	8		
139	49	58	144	59	08	06	68	12	00	4221	15	02	10	51	XX	6	8		
140	49	57	144	58	08	06	68	15	00	4221	14	02	07	51	92	7	8		
141	50	00	144	58	08	06	68	18	00	4221	14	10	10	51	82	7	8		
142	50	02	144	58	08	06	68	21	00	4221	13	02	06	51	82	6	8		
143	50	01	144	53	09	06	68	00	00	4221	12	61	10	51	82	6	8		
144	50	02	144	52	09	06	68	03	00	4221	12	61	07	51	82	6	8		
145	50	02	144	51	09	06	68	06	00	4221	11	61	06	50	82	7	8		
146	49	59	145	02	09	06	68	09	00	4221	11	01	16	52	82	6	5		
147	50	00	145	01	09	06	68	12	00	4221	11	80	19	53	XX	8	6		
148	50	04	144	56	09	06	68	15	00	4221	11	25	23	64	03	8	7		
149	50	01	145	01	09	06	68	18	00	4221	12	02	27	64	03	8	4		
150	50	00	144	57	09	06	68	21	00	4221	13	02	23	64	03	9	5		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
151	49	58	145	06	10	06	68	00	00	4221	13	25	22	64	02	9	4		
152	50	03	145	01	10	06	68	03	00	4221	13	15	31	64	73	8	8		
153	49	56	144	56	10	06	68	09	00	4221	11	80	26	75	XX	9	7		
154	50	01	145	06	10	06	68	15	00	4221	08	02	26	76	03	6	8		
155	50	04	145	01	10	06	68	18	00	4221	10	02	30	75	83	8	7		
156	50	03	144	52	10	06	68	21	00	4221	09	80	33	76	83	8	8		
157	50	01	145	00	12	06	68	03	00	4221	12	02	24	65	85	8	8		
158	49	58	145	55	12	06	68	06	00	4221	12	02	25	64	85	6	8		
159	49	56	144	53	12	06	68	09	00	4221	14	02	16	64	95	6	8		
160	49	59	144	58	12	06	68	12	00	4221	14	02	14	53	94	8	8		
161	49	58	144	57	12	06	68	15	00	4221	15	02	14	52	74	8	7		
162	50	00	144	57	12	06	68	18	00	4221	15	02	13	62	83	6	7		
163	49	57	145	00	12	06	68	21	00	4221	15	02	11	62	03	6	7		
164	49	57	145	01	13	06	68	00	00	4221	15	02	13	62	82	6	7		
165	49	57	145	02	13	06	68	03	00	4221	14	02	14	62	82	6	8		
166	50	01	145	00	13	06	68	06	00	4221	14	02	14	52	62	6	8		
167	49	59	145	03	13	06	68	09	00	4221	14	25	18	42	62	6	8		
168	49	58	145	00	13	06	68	12	00	4221	13	02	16	42	62	6	8		
169	49	55	145	07	13	06	68	15	00	4221	13	02	19	42	62	6	8		
170	50	01	145	00	13	06	68	18	00	4221	14	02	17	52	62	6	7		
171	50	02	145	04	13	06	68	21	00	4221	14	02	17	52	62	6	7		
172	49	59	144	56	14	06	68	00	00	4221	14	02	16	52	62	6	8		
173	50	01	144	58	14	06	68	03	00	4221	13	02	15	52	62	7	8		
174	50	02	144	59	14	06	68	06	00	4221	13	58	21	83	62	7	8		
175	50	00	145	02	14	06	68	09	00	4221	13	10	20	83	62	7	8		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
176	49	58	145	05	14	06	68	12	00	4221	14	02	17	73	XX	6	3		
177	50	05	145	08	14	06	68	15	00	4221	13	02	19	72	63	7	8		
178	50	01	144	58	14	06	68	18	00	4221	13	47	27	64	83	X	9		
179	50	05	144	55	14	06	68	21	00	4221	12	61	26	64	83	7	8		
180	49	57	144	51	15	06	68	00	00	4221	10	58	28	64	83	7	8		
181	50	00	144	53	15	06	68	03	00	4221	09	10	19	63	84	6	7		
182	50	00	144	58	15	06	68	06	00	4221	10	10	19	63	84	3	3		
183	50	02	144	59	15	06	68	09	00	4221	11	10	19	63	84	8	7		
184	49	57	145	03	15	06	68	12	00	4221	11	25	23	63	85	8	7		
185	50	02	145	05	15	06	68	15	00	4221	11	10	17	52	84	7	7		
186	50	01	145	00	15	06	68	18	00	4221	11	10	19	63	83	6	8		
187	50	05	145	00	15	06	68	21	00	4221	11	02	19	63	92	3	4		
188	49	55	145	02	16	06	68	00	00	4221	11	02	18	63	92	6	8		
189	49	56	145	00	16	06	68	03	00	4221	10	02	14	63	93	3	6		
190	49	57	144	59	16	06	68	06	00	4221	10	25	16	52	93	6	7		
191	50	00	144	58	16	06	68	09	00	4221	10	02	14	52	92	6	3		
192	49	57	145	01	16	06	68	12	00	4221	10	03	18	52	92	6	7		
193	49	59	145	02	16	06	68	15	00	4221	11	02	17	62	92	8	7		
194	50	00	145	02	16	06	68	18	00	4221	12	02	18	62	92	8	7		
195	50	01	145	02	16	06	68	21	00	4221	12	02	16	62	92	3	3		
196	49	55	145	03	17	06	68	00	00	4221	13	02	18	63	92	8	1		
197	49	58	145	02	17	06	68	03	00	4221	13	02	18	63	92	3	4		
198	50	00	145	00	17	06	68	06	00	4221	13	02	18	63	92	6	8		
199	50	03	145	01	17	06	68	09	00	4221	13	02	18	63	92	6	8		
200	49	55	145	00	17	06	68	12	00	4221	12	02	16	63	92	6	8		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
201	49	58	145	03	17	06	68	15	00	4221	10	02	11	63	92	8	8		
202	49	59	145	02	17	06	68	18	00	4221	09	02	08	62	93	3	7		
203	50	00	145	02	17	06	68	21	00	4221	07	02	08	51	92	6	8		
204	49	59	145	00	18	06	68	00	00	4221	06	25	04	50	02	6	8		
205	50	00	144	58	18	06	68	03	00	4221	05	15	18	51	92	6	7		
206	49	59	145	04	18	06	68	06	00	4221	05	01	23	61	82	8	4		
207	50	03	144	59	18	06	68	09	00	4221	05	02	26	52	73	8	7		
208	49	59	145	07	18	06	68	12	00	4221	05	02	29	42	73	8	7		
209	50	02	145	01	18	06	68	15	00	4221	05	80	33	53	76	9	7		
210	49	59	145	04	18	06	68	18	00	4221	06	02	32	65	73	8	7		
211	50	00	145	00	18	06	68	21	00	4221	07	15	35	76	74	8	7		
212	50	05	145	07	19	06	68	03	00	4221	12	02	27	76	94	8	8		
213	49	59	145	05	19	06	68	06	00	4221	14	80	28	76	94	8	8		
214	50	01	145	00	19	06	68	09	00	4221	16	80	23	75	95	6	8		
215	49	57	145	06	19	06	68	12	00	4221	17	25	24	75	95	6	8		
216	49	59	145	02	19	06	68	15	00	4221	17	80	23	75	96	6	8		
217	50	02	144	59	19	06	68	18	00	4221	18	02	18	73	84	6	8		
218	49	59	144	57	19	06	68	21	00	4221	18	02	20	73	84	6	7		
219	49	58	145	08	20	06	68	03	00	4221	18	02	13	52	83	6	8		
220	50	00	145	05	20	06	68	06	00	4221	19	02	08	62	83	6	8		
221	50	00	145	04	20	06	68	09	00	4221	18	02	03	61	83	6	8		
222	49	59	144	58	20	06	68	12	00	4221	17	02	07	51	73	6	8		
223	49	58	144	57	20	06	68	15	00	4221	16	02	12	52	73	6	8		
224	50	01	144	58	20	06	68	18	00	4221	16	02	16	51	72	6	8		
225	49	59	145	01	20	06	68	21	00	4221	15	02	14	51	82	6	7		

TABLE I

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
226	50	04	144	58	21	06	68	00	00	4221	.15	02	15	52	82	3	7		
227	50	02	145	02	21	06	68	03	00	4221	15	01	17	52	82	3	4		
228	50	04	145	05	21	06	68	06	00	4221	15	03	19	52	82	8	7		
229	50	01	144	59	21	06	68	09	00	4221	16	02	18	52	82	8	8		
230	50	01	145	01	21	06	68	12	00	4221	16	01	16	52	93	6	2		
231	50	01	145	06	21	06	68	15	00	4221	18	03	16	52	85	8	7		
232	50	02	144	58	21	06	68	18	00	4221	19	02	16	62	84	8	2		
233	50	03	145	02	21	06	68	21	00	4221	20	02	14	62	84	6	3		
234	49	58	145	03	22	06	68	00	00	4221	22	02	08	62	94	6	6		
235	50	00	145	07	22	06	68	03	00	4221	22	02	07	51	94	6	5		
236	50	01	144	59	22	06	68	06	00	4221	23	02	09	51	94	6	7		
237	50	00	144	56	22	06	68	09	00	4221	24	01	10	51	94	6	2		
238	49	57	144	53	22	06	68	12	00	4221	23	02	11	51	94	6	6		
239	49	58	145	00	22	06	68	15	00	4221	23	03	15	51	93	6	7		
240	49	59	145	03	22	06	68	18	00	4221	22	02	23	52	93	6	8		
241	50	00	145	06	22	06	68	21	00	4221	21	02	25	52	93	6	8		
242	49	59	145	05	23	06	68	00	00	4221	20	02	25	64	82	8	4		
243	50	06	145	06	23	06	68	03	00	4221	17	02	29	64	93	7	8		
244	50	07	145	12	23	06	68	06	00	4221	14	61	29	64	73	7	8		
245	49	55	144	59	23	06	68	12	00	4221	09	61	26	65	73	7	8		
246	49	58	145	04	23	06	68	15	00	4221	08	45	16	64	85	X	9		
247	50	00	145	00	23	06	68	18	00	4221	07	51	14	63	84	7	8		
248	50	01	145	00	23	06	68	21	00	4221	08	02	20	63	94	7	8		
249	49	57	145	07	24	06	68	00	00	4221	10	02	16	63	84	8	1		
250	50	01	145	08	24	06	68	03	00	4221	10	02	17	63	84	0	4		

TABLE 1

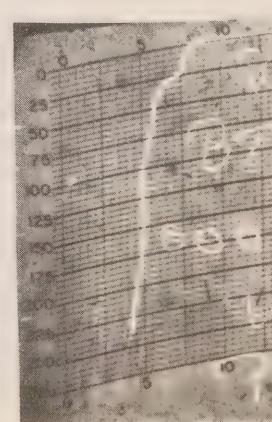
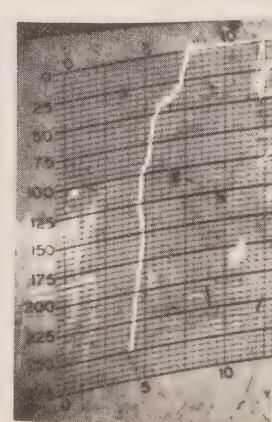
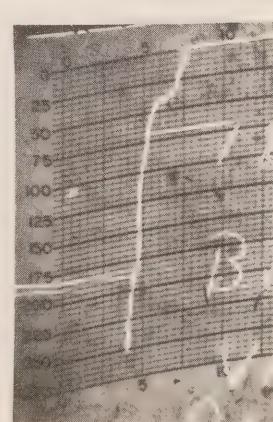
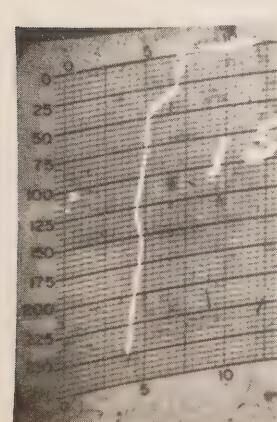
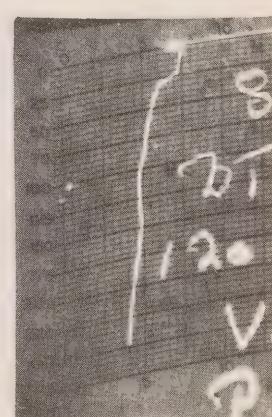
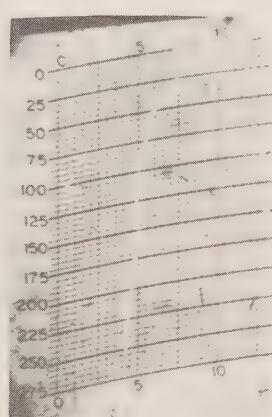
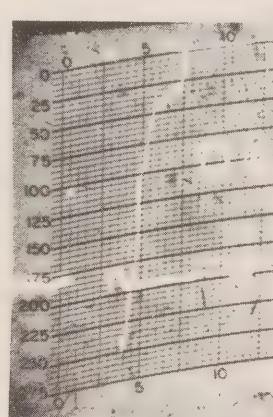
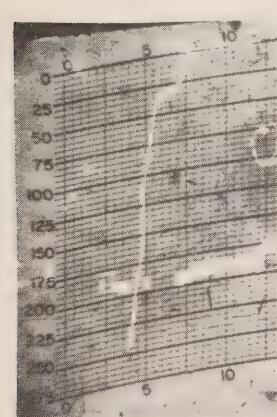
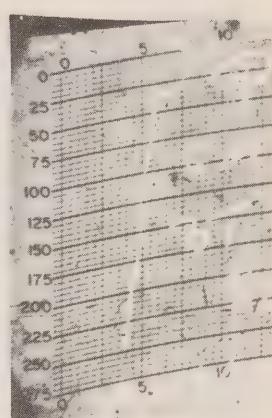
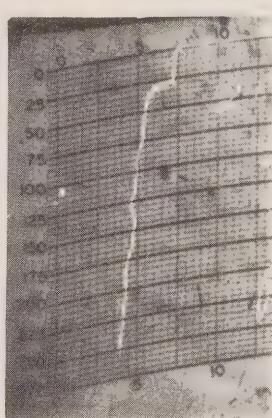
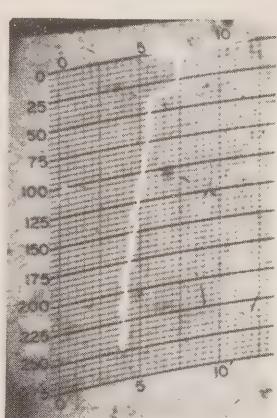
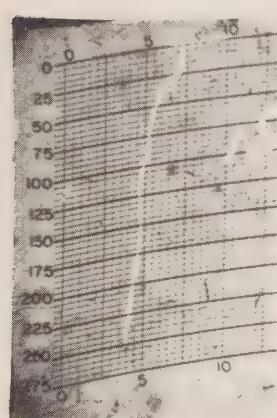
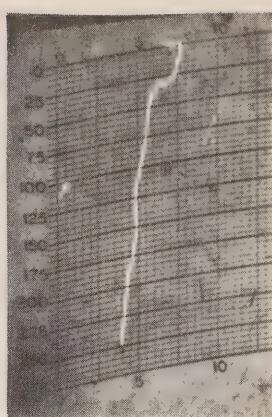
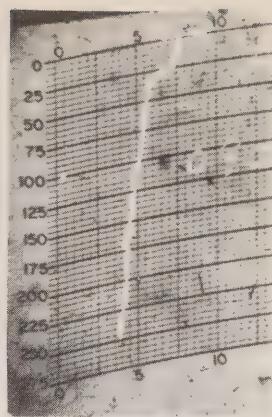
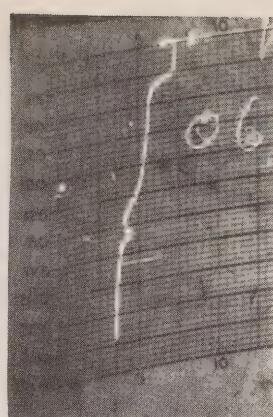
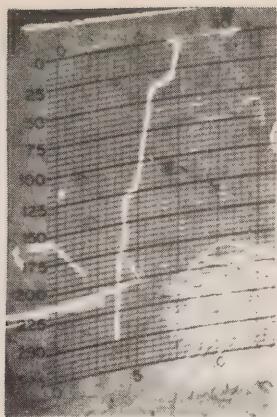
CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
251	50	03	145	08	24	06	68	06	00	4221	09	03	18	52	84	0	6		
252	49	59	144	58	24	06	68	09	00	4221	09	01	21	52	74	3	2		
253	49	59	144	57	24	06	68	12	00	4221	09	03	21	52	74	6	8		
254	50	00	144	59	24	06	68	15	00	4221	09	02	17	62	74	6	7		
255	50	01	145	00	24	06	68	18	00	4221	08	02	16	63	95	6	6		
256	50	03	144	59	24	06	68	21	00	4221	08	02	18	63	95	8	2		
257	50	03	145	00	25	06	68	00	00	4221	07	02	16	63	05	3	4		
258	50	02	145	04	25	06	68	03	00	4221	06	02	12	63	95	3	2		
259	49	59	145	15	25	06	68	06	00	4221	06	02	15	62	05	6	4		
260	50	01	145	01	25	06	68	09	00	4221	05	02	20	63	05	6	6		
261	49	59	144	57	25	06	68	12	00	4221	05	02	19	63	04	6	6		
262	50	01	144	55	25	06	68	15	00	4221	05	02	20	53	05	6	7		
263	49	59	145	00	25	06	68	18	00	4221	05	25	17	63	05	4	8		
264	49	59	145	00	25	06	68	21	00	4221									
265	49	54	145	02	26	06	68	00	00	4221	06	02	19	63	04	8	8		
266	50	00	145	01	26	06	68	03	00	4221	07	25	19	63	04	8	8		
267	50	02	145	00	26	06	68	06	00	4221	09	03	20	63	93	8	7		
268	50	02	144	58	26	06	68	09	00	4221	10	02	18	63	93	8	8		
269	49	56	144	59	26	06	68	12	00	4221	11	02	28	84	93	8	7		
270	50	04	144	57	26	06	68	15	00	4221	13	02	30	74	83	8	7		
271	50	01	145	00	26	06	68	18	00	4221	13	15	30	64	93	6	8		
272	50	01	144	54	26	06	68	21	00	4221	14	02	28	74	93	8	7		
273	49	55	145	04	27	06	68	00	00	4221	16	02	30	65	93	6	6		
274	49	57	144	58	27	06	68	03	00	4221	16	02	28	76	94	8	7		
275	50	02	145	10	27	06	68	09	00	4221	21	02	30	65	94	7	8		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
276	49	59	145	00	27	06	68	15	00	4221	25	02	27	75	97	7	8		
277	50	00	145	04	27	06	68	18	00	4221	27	20	26	65	95	7	8		
278	50	03	145	09	27	06	68	21	00	4221	28	20	24	64	95	6	7		
279	50	06	145	05	28	06	68	00	00	4221	29	02	24	65	95	6	7		
280	49	59	145	03	28	06	68	03	00	4221	30	02	20	64	95	6	7		
281	49	58	145	00	28	06	68	06	00	4221	31	02	18	62	94	6	8		
282	50	00	144	55	28	06	68	09	00	4221	32	25	16	62	94	6	8		
283	50	00	145	04	28	06	68	12	00	4221	32	02	13	52	93	6	8		
284	50	01	145	02	28	06	68	15	00	4221	33	02	07	51	83	6	8		
285	50	00	145	01	28	06	68	18	00	4221	33	15	04	50	82	6	8		
286	50	02	145	00	28	06	68	21	00	4221	32	02	10	51	82	6	8		
287	49	57	144	56	29	06	68	00	00	4221	31	02	14	51	82	4	8		
288	49	56	144	55	29	06	68	03	00	4221	30	61	14	51	22	7	8		
289	49	59	144	54	29	06	68	06	00	4221	28	61	12	51	02	3	8		
290	50	00	144	55	29	06	68	09	00	4221	26	02	16	51	02	6	8		
291	49	59	144	58	29	06	68	12	00	4221	25	61	19	52	02	7	8		
292	50	02	145	02	29	06	68	15	00	4221	22	02	24	73	02	6	8		
293	50	03	145	05	29	06	68	18	00	4221	21	61	30	55	94	7	8		
294	50	07	145	10	29	06	68	21	00	4221	19	51	30	66	94	7	8		
295	50	04	144	57	30	06	68	00	00	4221	17	51	30	65	86	7	8		
296	50	06	145	06	30	06	68	03	00	4221	14	51	23	64	86	7	8		
297	50	02	145	00	30	06	68	06	00	4221	14	51	10	52	05	X	9		
298	50	03	145	01	30	06	68	09	00	4221	14	51	07	52	84	X	9		
299	50	00	145	04	30	06	68	12	00	4221	13	43	02	51	73	X	9		
300	50	07	145	08	30	06	68	15	00	4221	13	10	09	51	74	7	7		

TABLE 1

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
301	50	00	145	01	30	06	68	18	00	4221	14	10	13	52	94	6	7		
302	49	38	139	40	01	07	68	15	00	3840	18	01	31	35	44	5	6		
303	49	40	138	40	01	07	68	18	00	3890	20	01	25	35	33	3	5		
304	49	30	137	40	01	07	68	22	54	3850	22	02	19	22	33	7	3		
305	49	26	136	40	02	07	68	02	00	3767	22	01	17	22	35	0	2		
306	49	23	135	40	02	07	68	07	00	3200	22	01	22	25	24	3	7		
307	49	17	134	40	02	07	68	09	54	3548	21	03	10	32	44	8	8		
308	49	15	133	40	02	07	68	13	15	3200	20	02	15	22	44	7	8		
309	49	05	131	40	02	07	68	19	00	2875	19	01	04	23	23	3	3		
310	49	02	130	40	02	07	68	23	00	2930	19	03	10	22	42	6	8		
311	48	55	129	40	03	07	68	02	35	2601	18	02	12	22	42	7	8		
312	48	51	128	40	03	07	68	05	05	2529	18	01	12	21	31	7	8		

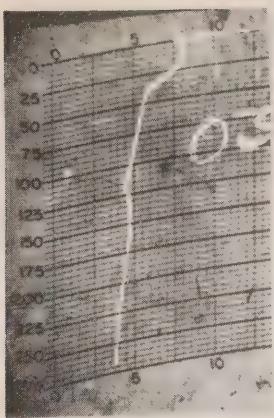


13

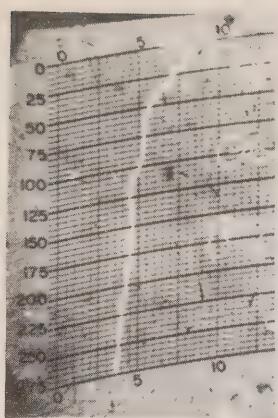
14

15

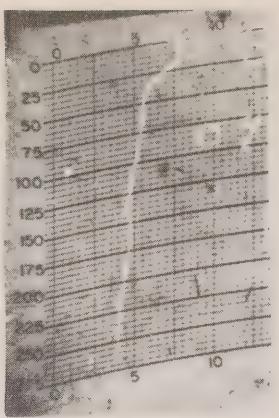
16



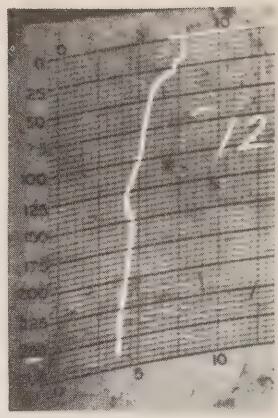
33



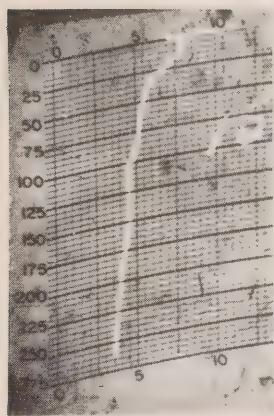
34



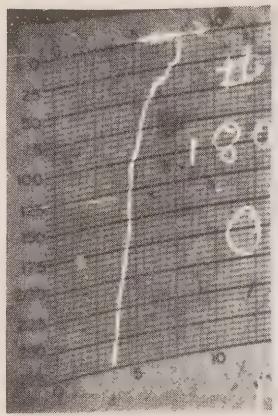
35



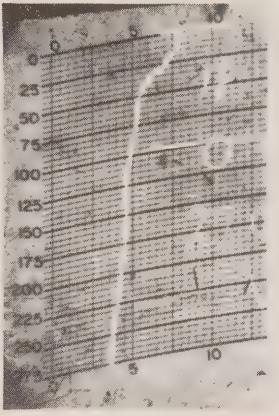
36



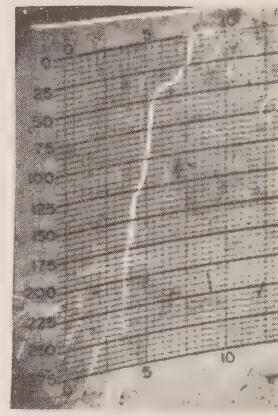
37



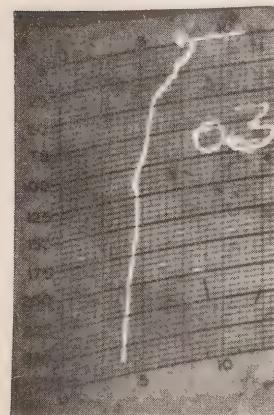
38



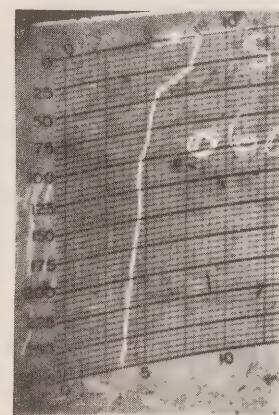
39



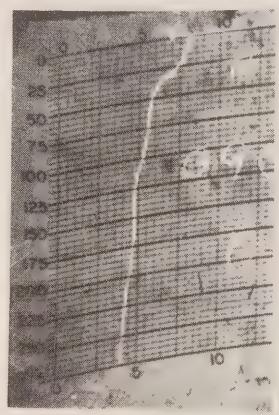
40



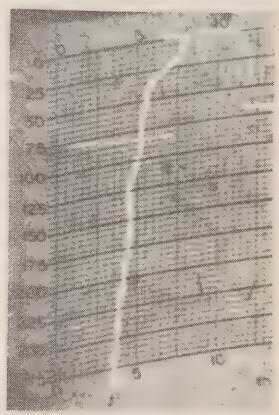
41



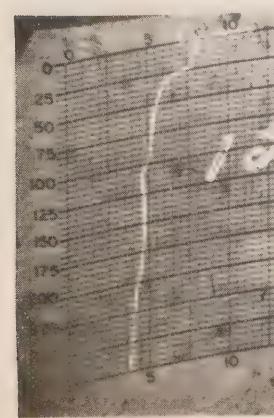
42



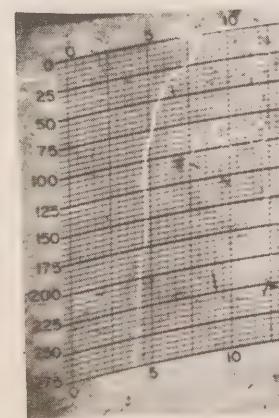
43



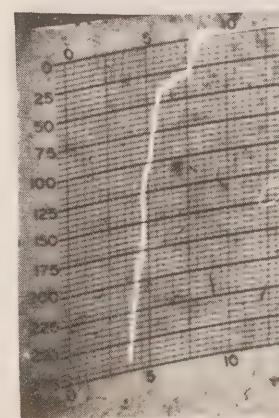
44



45



46



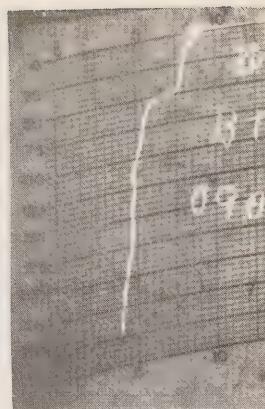
47



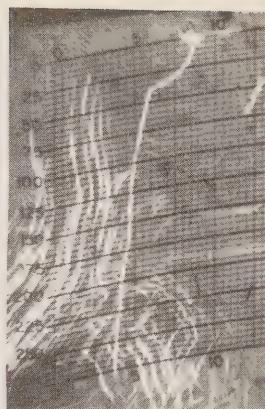
48



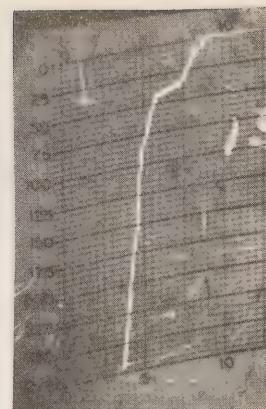
113



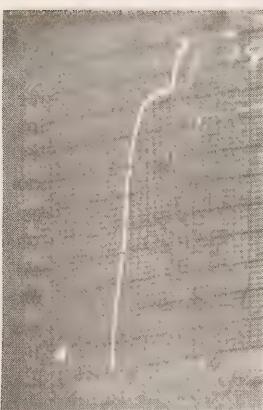
114



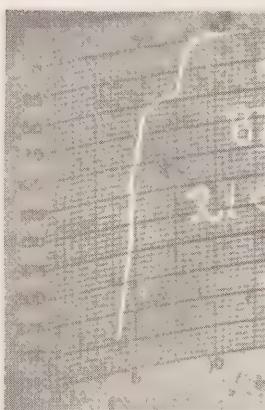
115



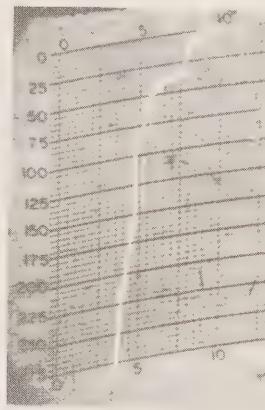
116



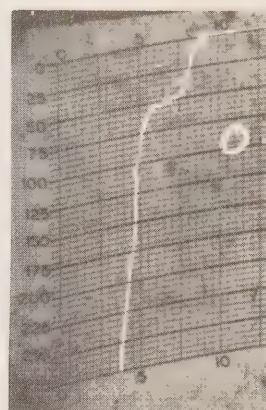
117



118



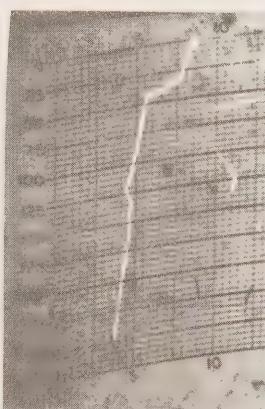
119



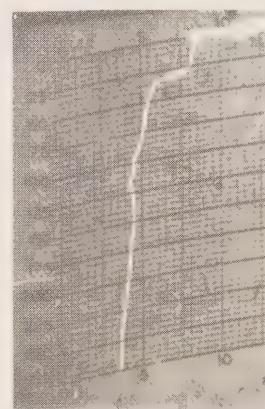
120



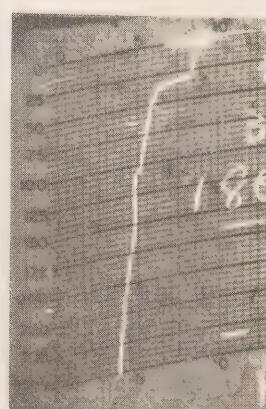
121



122



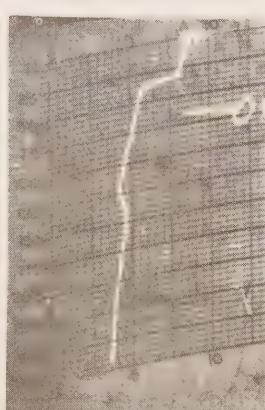
123



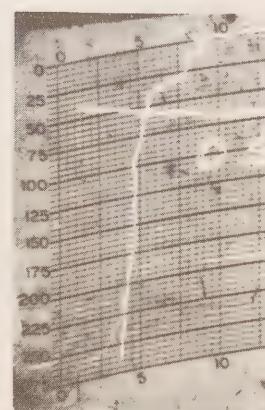
125



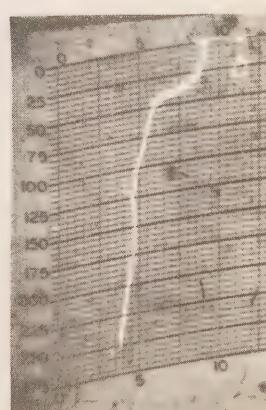
126



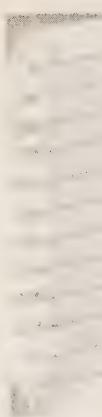
127



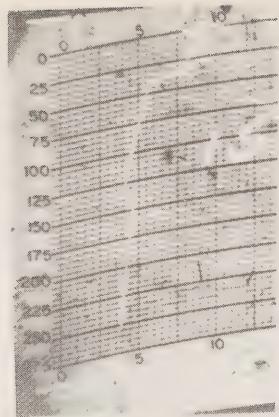
128



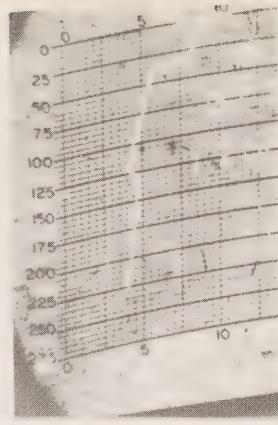
129



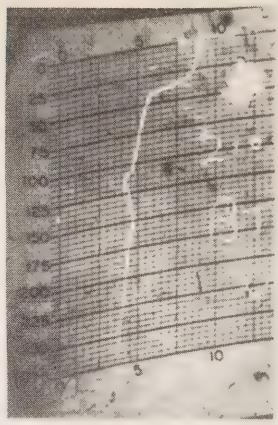
147



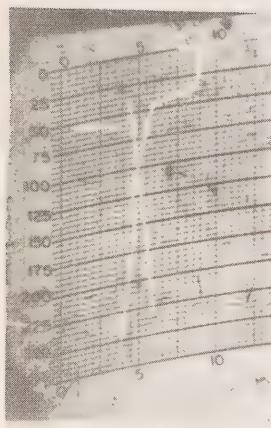
148



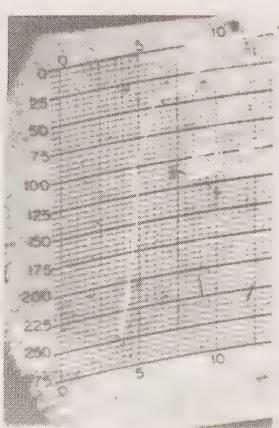
149



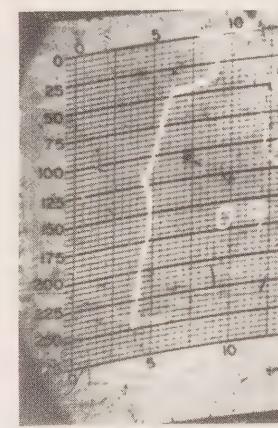
150



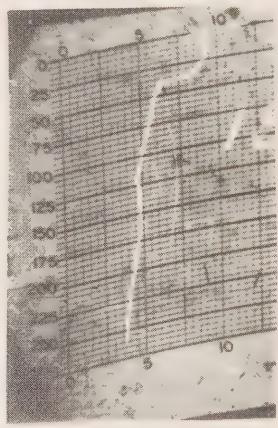
151



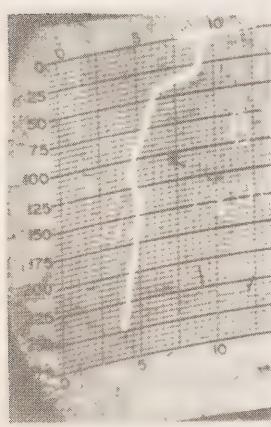
152



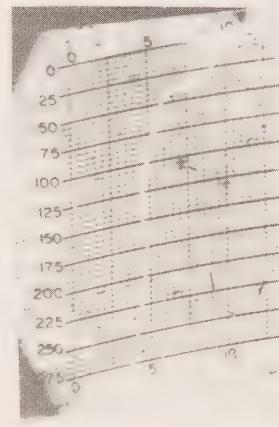
153



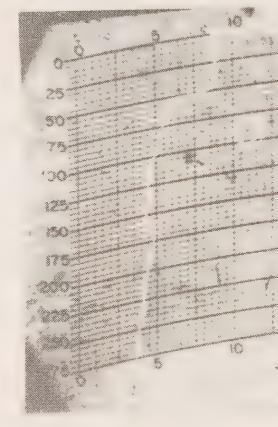
154



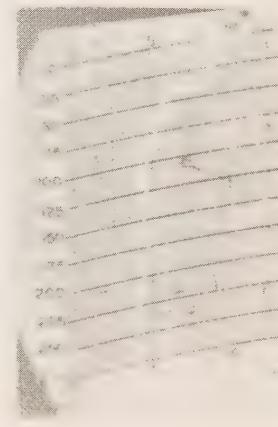
155



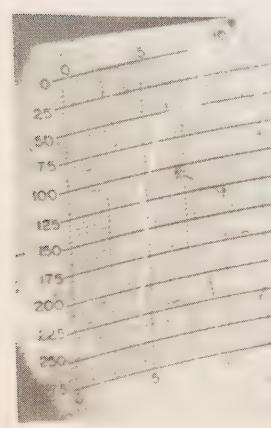
156



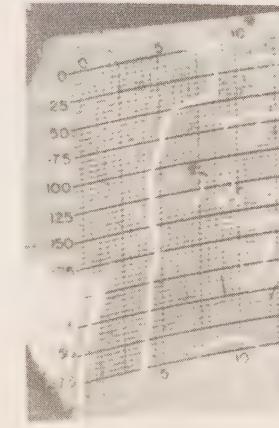
157



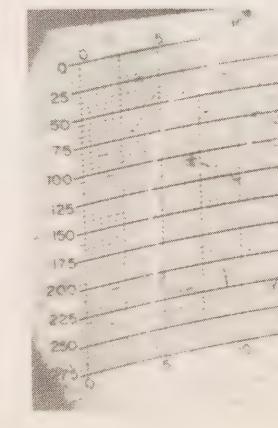
158



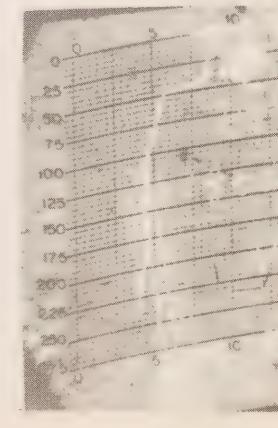
159



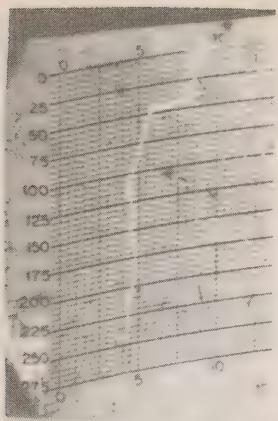
160



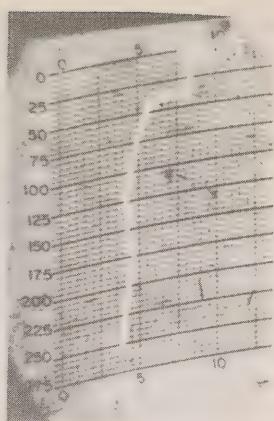
161



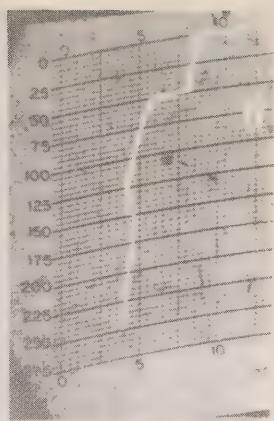
162



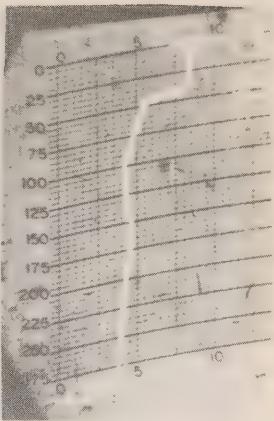
163



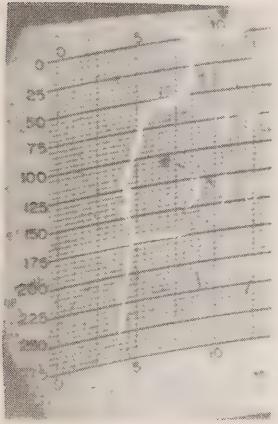
164



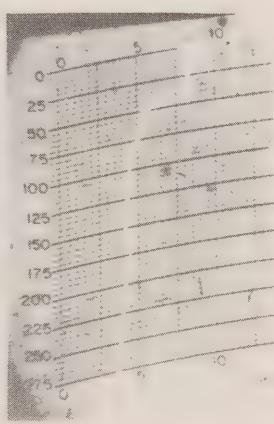
165



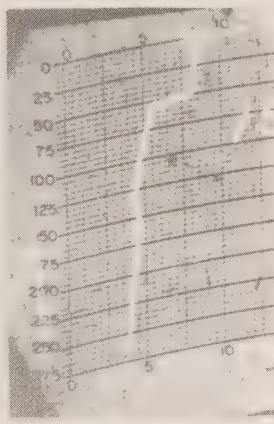
166



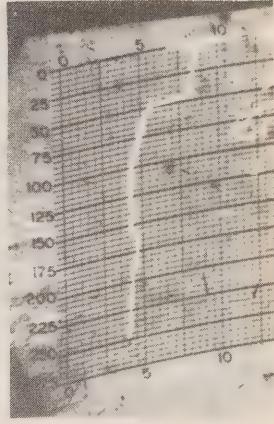
167



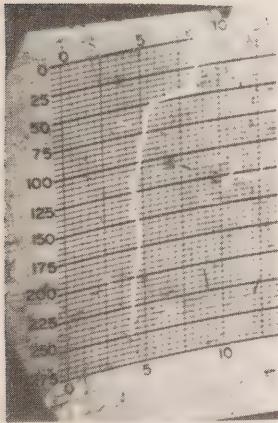
168



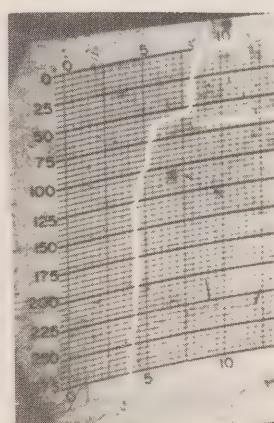
169



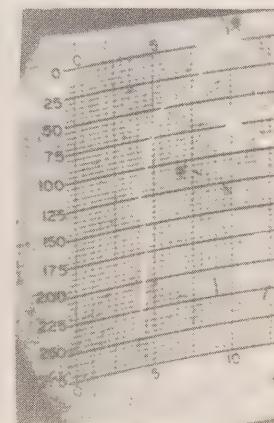
170



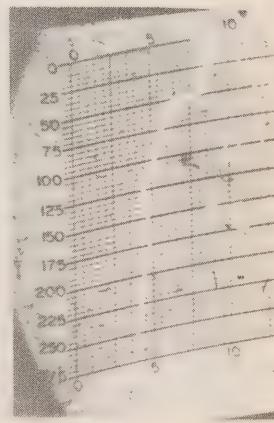
171



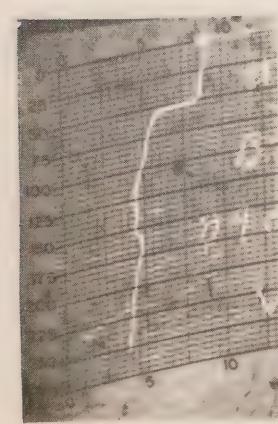
172



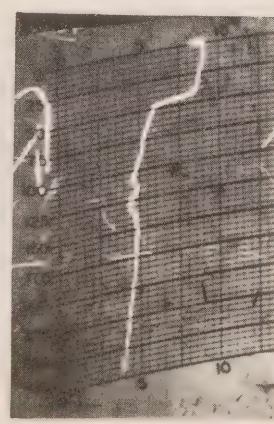
173



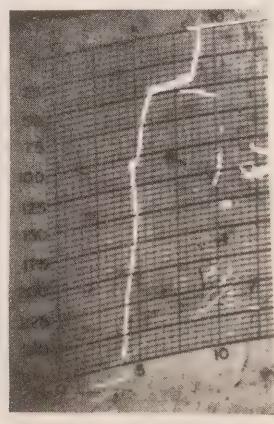
174



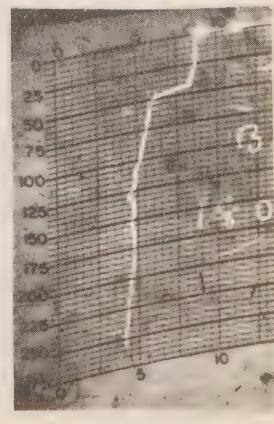
175



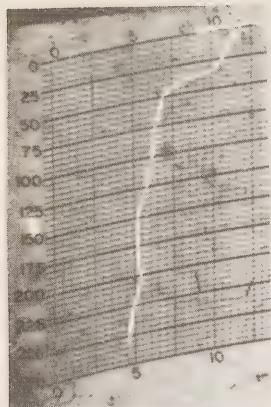
176



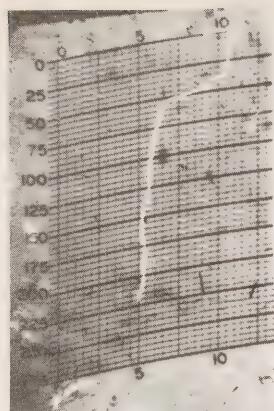
177



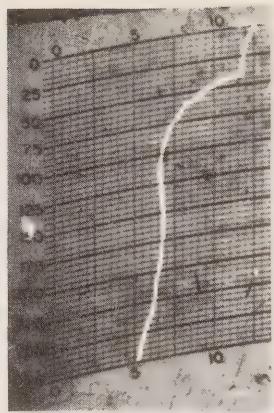
178



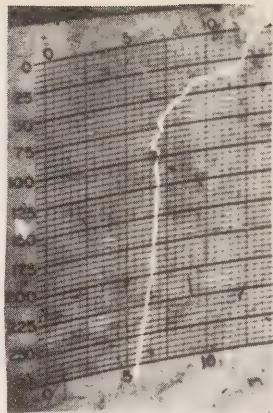
307



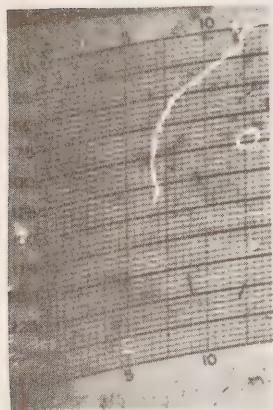
308



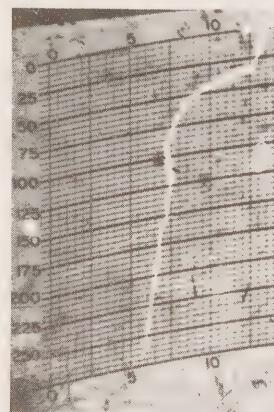
309



310



311



312



124

137

CCGS "QUADRA" 02-68-007

BATHYTHERMOGRAMS

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
001	48	33	125	32	28	06	68	22	25	0128	01	02	20	33			8	1	
002	48	38	126	00	29	06	68	00	00	0110	18	02	25	33			0	0	
003	49	00	130	40	29	06	68	15	00	2930	26	02	30	45			4	8	
004	49	05	131	41	29	06	68	18	30	2875	27	02	15	45			4	8	
005	49	09	132	40	29	06	68	21	50	3275	26	02	15	33			6	8	
006	49	15	133	40	30	06	68	01	40	3200	27	02	06	22			6	8	
007	49	18	134	40	30	06	68	04	00	3550	27	02	04	22			6	8	
008	49	22	135	40	30	06	68	07	00	3200	27	02	02	22			6	8	
009	49	26	136	40	30	06	68	10	30	3775	22	02	04				7	8	
010	49	30	137	40	30	06	68	14	00	3850	23	02	02	22			7	8	
011	49	34	138	40	30	06	68	16	00	3890	21	02	24	34			7	8	
012	49	38	139	40	30	06	68	20	40	3840	20	02	22	34			7	8	
013	49	41	140	40	01	07	68	00	00	3881	16	20	27	34			7	8	
014	49	45	141	40	01	07	68	03	00	3970	16	51	27	45			7	8	
015	50	05	145	05	01	07	68	15	00	4221	14	51	15	05			7	8	
016	50	07	145	02	01	07	68	18	00	4221	15	10	17	04			7	8	
017	49	58	145	02	01	07	68	21	00	4221	16	01	12	03			6	3	
018	50	02	145	04	02	07	68	00	00	4221	16	28	13	02			6	8	
019	50	05	145	08	02	07	68	03	00	4221	15	28	13	22			8	7	
020	50	05	145	04	02	07	68	06	00	4221	14	51	16	23			9	9	
021	50	00	145	04	02	07	68	09	00	4221	15	20	20	33			8	7	
022	49	58	145	07	02	07	68	12	00	4221	15	45	20	23			9	9	
023	49	58	145	14	02	07	68	15	00	4221	14	61	20	22			8	7	
024	49	57	145	11	02	07	68	18	00	4221	14	61	22	22			8	7	
025	50	02	144	58	02	07	68	21	00	4221	14	02	26	22			8	7	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
026	49	58	145	04	03	07	68	00	00	4221	13	61	23	22			4	5	
027	49	57	145	11	03	07	68	03	00	4221	12	61	23	05	64	7	8		
028	50	00	145	07	03	07	68	06	00	4221	11	61	23	05	65	7	8		
029	50	04	144	55	03	07	68	09	00	4221	11	51	18	05	65	7	8		
030	50	10	144	52	03	07	68	12	00	4221	13	51	14	05	65	7	8		
031	50	10	144	55	03	07	68	15	00	4221	12	61	10	05	65	5	8		
032	49	59	145	00	03	07	68	18	00	4221	13	10	09	05	65	6	8		
033	49	58	145	03	03	07	68	21	00	4221	12	02	11	06	65	6	8		
034	50	04	145	04	04	07	68	00	00	4221	12	10	12	06	63	6	8		
035	50	05	145	02	04	07	68	03	00	4221	12	01	12	06	63	4	4		
036	50	04	144	59	04	07	68	06	00	4221	12	02	13	06	63	7	7		
037	50	00	145	00	04	07	68	09	00	4221	12	02	16	06	63	8	8		
038	50	01	145	07	04	07	68	12	00	4221	12	02	08	00	62	8	8		
039	50	00	145	12	04	07	68	15	00	4221	12	53	04	00	62	8	8		
040	50	00	144	59	04	07	68	18	00	4221	12	02	00	00	62	8	8		
041	50	01	144	58	04	07	68	21	00	4221	12	02	00	00	62	8	8		
042	50	01	144	58	05	07	68	00	00	4221	13	02	00	00	62	8	8		
043	50	02	144	58	05	07	68	03	00	4221	13	02	02	00	62	6	8		
044	50	05	144	57	05	07	68	06	00	4221	12	02	00	00	62	6	8		
045	50	07	144	53	05	07	68	09	00	4221	15	02	05	00	62	6	8		
046	50	10	144	54	05	07	68	12	00	4221	16	02	03	00	62	6	8		
047	50	03	149	58	05	07	68	15	00	4221	16	02	05	00	62	6	8		
048	50	03	145	03	05	07	68	18	00	4221	15	02	02	52	00	6	8		
049	50	04	145	06	05	07	68	21	00	4221	16	02	05	53	00	6	8		
050	50	03	145	09	06	07	68	00	00	4221	16	02	12	52	00	6	8		

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
051	50	03	145	12	06	07	68	03	00	4221	14	02	14	21			7	8	
052	50	01	145	05	06	07	68	06	00	4221	12	02	18	21			7	8	
053	50	01	144	59	06	07	68	09	00	4221	11	61	22	23			7	8	
054	50	04	145	02	06	07	68	15	00	4221	08	61	24	33			7	8	
055	50	04	144	51	06	07	68	18	00	4221	05	61	28	33			7	8	
056	49	54	144	37	06	07	68	21	00	4221	02	61	28	33			7	8	
057	50	02	144	57	07	07	68	00	00	4221	01	61	15	22			7	8	
058	50	03	145	03	07	07	68	03	00	4221	-99	61	13	22			6	8	
059	50	01	145	05	07	07	68	06	00	4221	-97	47	05	33			9	9	
060	50	04	145	05	07	07	68	09	00	4221	-97	51	07	34			9	9	
061	50	05	145	07	07	07	68	12	00	4221	-97	51	09	34			9	9	
062	50	02	145	09	07	07	68	15	00	4221	-96	45	07	45			6	8	
063	50	00	145	04	07	07	68	18	00	4221	-98	10	23	44			6	8	
064	50	00	144	58	07	07	68	21	00	4221	01	20	29	34			6	8	
065	50	06	145	06	08	07	68	00	00	4221	03	02	27	34			6	7	
066	50	04	145	22	08	07	68	03	00	4221	05	01	26	34			6	8	
067	50	04	145	14	08	07	68	06	00	4221	06	02	27	34			6	8	
068	50	00	145	04	08	07	68	09	00	4221	08	02	18	33			6	8	
069	50	05	144	56	08	07	68	12	00	4221	09	02	18	23			5	8	
070	50	05	144	52	08	07	68	15	00	4221	09	02	18	23			6	8	
071	50	01	144	58	08	07	68	18	00	4221	09	02	12	22			5	8	
072	50	00	144	54	08	07	68	21	00	4221	09	51	08	22			6	8	
073	50	01	144	53	09	07	68	00	00	4221	09	47	09	22			9	9	
074	50	00	144	53	09	07	68	03	00	4221	08	45	07	22			9	9	
075	50	03	144	59	09	07	68	06	00	4221	06	45	10	22			9	9	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
076	50	08	144	58	09	07	68	09	00	4221	05	02	14	22			6	8	
077	50	09	144	57	09	07	68	12	00	4221	04	51	09	22			6	8	
078	50	06	144	55	09	07	68	15	00	4221	03	02	10	02			6	8	
079	49	57	145	00	09	07	68	18	00	4221	03	61	12	21			6	8	
080	50	04	144	59	09	07	68	21	00	4221	02	61	11	21			6	8	
081	50	10	144	59	10	07	68	00	00	4221	01	61	06	22			8	8	
082	49	55	145	02	10	07	68	03	00	4221	02	01	06	22			8	7	
083	49	52	145	01	10	07	68	06	00	4221	03	01	06	22			8	6	
084	49	56	145	00	10	07	68	09	00	4221	04	02	09	22			8	7	
085	50	07	144	55	10	07	68	12	00	4221	05	02	17	22			8	8	
086	49	50	144	53	10	07	68	15	00	4221	05	02	22	22			8	8	
087	50	01	145	00	10	07	68	18	00	4221	06	02	26	22			8	8	
088	49	57	144	54	10	07	68	21	00	4221	07	02	25	22			8	8	
089	50	02	144	58	11	07	68	00	00	4221	07	02	25	22			8	8	
090	50	00	145	01	11	07	68	03	00	4221	09	02	15	22			6	8	
091	50	00	144	58	11	07	68	06	00	4221	09	02	15	22			6	8	
092	50	04	144	55	11	07	68	09	00	4221	10	02	15	22			6	7	
093	50	01	144	50	11	07	68	12	00	4221	09	02	12	21			6	6	
094	50	06	144	45	11	07	68	15	00	4221	10	01	07	11			6	7	
095	49	59	145	00	11	07	68	18	00	4221	10	01	05	11			6	6	
096	49	59	145	05	12	07	68	00	00	4221	09	02	06	11			8	2	
097	49	59	144	58	12	07	68	03	00	4221	10	02	08	11			8	3	
098	49	58	145	00	12	07	68	06	00	4221	09	03	06	22			8	6	
099	50	01	144	57	12	07	68	09	00	4221	09	02	13	32			8	6	
100	50	05	144	55	12	07	68	12	00	4221	08	02	10	22			8	8	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
101	50	00	144	59	12	07	68	15	00	4221	06	51	14	22			8	8	
102	49	55	145	00	12	07	68	18	00	4221	04	51	16	22			8	8	
103	49	56	144	54	12	07	68	21	00	4221	04	01	14	22			8	8	
104	49	51	144	50	13	07	68	00	00	4221	05	01	12	22			8	8	
105	50	02	145	01	13	07	68	03	00	4221	05	01	12	22			6	6	
106	50	02	145	02	13	07	68	06	00	4221	03	02	18	22			8	8	
107	50	04	144	58	13	07	68	09	00	4221	03	61	16	22			6	8	
109	50	05	144	58	13	07	68	15	00	4221	02	02	16	22			5	4	
110	50	02	145	00	13	07	68	18	00	4221	03	03	20	22			5	7	
111	50	02	144	55	13	07	68	21	00	4221	04	51	20	22			5	8	
112	50	05	145	10	14	07	68	00	00	4221	06	02	21	22			5	8	
113	50	01	145	03	14	07	68	03	00	4221	09	02	16	22			6	8	
114	50	07	144	58	14	07	68	06	00	4221	11	02	12	11			6	7	
115	50	02	144	56	14	07	68	09	00	4221	12	02	10	11			6	6	
116	50	05	144	47	14	07	68	12	00	4221	14	02	10	11			6	6	
117	50	05	144	44	14	07	68	15	00	4221	14	02	13	11			6	7	
118	49	57	144	54	14	07	68	18	00	4221	14	02	12	11			6	8	
119	50	00	144	53	14	07	68	21	00	4221	16	02	10	11			6	8	
120	50	00	144	52	15	07	68	00	00	4221	17	02	05	11			6	7	
121	50	02	144	45	15	07	68	03	00	4221	17	02	09	11			7	7	
122	50	01	144	49	15	07	68	06	00	4221	18	02	08	11			7	8	
123	50	02	144	58	15	07	68	09	00	4221	18	02	10	11			4	8	
124	50	03	145	00	15	07	68	12	00	4221	18	02	11	11			4	8	
125	50	05	144	55	15	07	68	15	00	4221	18	02	13	11			4	8	
126	49	57	145	03	15	07	68	18	00	4221	18	51	09	11			4	6	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Aml	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
127	49	58	145	01	15	07	68	21	00	4221	18	01	08	11			6	3	
128	50	00	145	00	16	07	68	00	00	4221	19	02	06	11			4	3	
129	50	02	144	55	16	07	68	03	00	4221	19	02	07	11			8	8	
130	50	00	144	53	16	07	68	06	00	4221	19	02	08	11			8	8	
131	50	00	145	00	16	07	68	09	00	4221	19	02	08	11			8	8	
132	50	03	144	57	16	07	68	12	00	4221	20	51	08	11			7	8	
133	50	05	144	58	16	07	68	15	00	4221	20	02	08	11			7	8	
134	49	59	145	01	16	07	68	18	00	4221	21	02	11	11			7	6	
135	50	01	145	00	16	07	68	21	00	4221	22	15	04	11			7	7	
136	50	01	144	59	17	07	68	00	00	4221	23	02	10	11			7	8	
137	50	05	144	55	17	07	68	03	00	4221	23	02	10	11					
138	50	09	144	53	17	07	68	06	00	4221	22	02	12	11			7	8	
139	50	01	145	00	17	07	68	09	00	4221	23	02	08	11			8	8	
140	50	04	145	03	17	07	68	12	00	4221	24	02	08	11			8	8	
141	50	04	144	59	17	07	68	15	00	4221	24	02	09	11			8	7	
142	50	01	144	58	17	07	68	18	00	4221	24	02	10	11			8	8	
143	50	02	144	55	17	07	68	21	00	4221	25	53	13	11			8	5	
144	50	04	144	55	18	07	68	00	00	4221	25	20	10	11			8	6	
145	50	06	145	00	18	07	68	03	00	4221	25	02	08	11			8	6	
146	50	08	144	51	18	07	68	06	00	4221	25	02	04	11			8	7	
147	49	59	145	00	18	07	68	09	00	4221	25	02	05	11			8	7	
148	49	58	144	57	18	07	68	12	00	4221	26	02	04	11			8	8	
149	50	01	144	55	18	07	68	15	00	4221	26	50	04	11			8	8	
150	49	59	144	53	18	07	68	18	00	4221	25	50	00	11			8	7	
151	49	59	144	53	18	07	68	21	00	4221	26	02	04	11			8	8	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
152	49	59	144	50	19	07	68	00	00	4221	27	02	04	11			8	8	
153	50	01	144	59	19	07	68	03	00	4221	27	02	06	11			7	6	
154	50	01	145	00	19	07	68	06	00	4221	27	02	05	11			8	7	
155	50	02	144	58	19	07	68	09	00	4221	27	02	08	11			8	8	
156	50	01	145	00	19	07	68	12	00	4221	27	02	11	11			8	8	
157	50	03	145	00	19	07	68	15	00	4221	25	02	08	11			8	8	
158	50	02	144	58	19	07	68	18	00	4221	25	61	10	11			8	8	
159	50	04	144	58	19	07	68	21	00	4221	25	61	06	11			8	8	
160	50	04	144	59	20	07	68	00	00	4221	24	80	08	11			8	8	
161	50	08	144	58	20	07	68	03	00	4221	23	02	10	11			8	8	
162	50	08	144	56	20	07	68	06	00	4221	23	02	08	11			8	8	
163	50	03	144	58	20	07	68	09	00	4221	23	02	08	11			8	8	
164	50	01	144	55	20	07	68	12	00	4221	23	02	12	11			8	6	
165	50	07	144	55	20	07	68	15	00	4221	23	02	14	11			8	7	
166	49	59	145	00	20	07	68	18	00	4221	24	20	10	11			7	7	
167	50	00	144	55	20	07	68	21	00	4221	24	02	14	11			8	7	
168	49	57	144	51	21	07	68	00	00	4221	25	02	12	11			8	8	
169	50	02	145	03	21	07	68	03	00	4221	24	02	08	11			8	8	
170	50	05	145	00	21	07	68	06	00	4221	24	51	10	22			8	8	
171	50	05	145	00	21	07	68	09	00	4221	23	61	11	22			8	8	
172	50	05	145	05	21	07	68	12	00	4221	22	61	17	22			8	8	
173	50	05	145	02	21	07	68	15	00	4221	21	61	17	22			8	8	
174	49	58	145	00	21	07	68	18	00	4221	21	61	16	22			8	8	
175	50	04	145	02	21	07	68	21	00	4221	20	61	18	22			8	8	
176	50	03	145	02	22	07	68	00	00	4221	20	61	18	22			8	8	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
177	50	04	145	05	22	07	68	03	00	4221	17	61	22	22			8	8	
178	50	02	145	01	22	07	68	06	00	4221	16	51	26	22			8	8	
179	49	53	145	00	22	07	68	12	00	4221	15	51	26	22			8	8	
180	50	07	144	58	22	07	68	15	00	4221	15	61	16	22			8	8	
181	49	59	145	00	22	07	68	18	00	4221	16	61	20	22			7	8	
182	50	03	145	01	22	07	68	21	00	4221	17	45	20	22			9	9	
183	49	59	145	03	23	07	68	00	00	4221	17	43	15	22			9	9	
184	50	02	145	02	23	07	68	03	00	4221	17	28	18	11			7	8	
185	49	59	144	58	23	07	68	06	00	4221	15	10	15	11			7	8	
186	50	03	145	00	23	07	68	09	00	4221	14	51	15	11			7	9	
187	50	08	145	02	23	07	68	12	00	4221	14	51	17	11			7	9	
188	50	06	145	01	23	07	68	15	00	4221	14	51	22	11			8	8	
189	49	57	145	00	23	07	68	18	00	4221	14	10	22	11			8	7	
190	50	00	144	55	23	07	68	21	00	4221	14	02	21	11			7	8	
191	49	57	144	52	24	07	68	00	00	4221	15	46	20	11			8	8	
192	49	59	144	51	24	07	68	03	00	4221	14	51	04	11			8	8	
193	50	00	144	59	24	07	68	06	00	4221	12	45	11	11			9	9	
194	50	03	144	59	24	07	68	09	00	4221	11	51	17	11			9	9	
195	49	59	144	58	24	07	68	12	00	4221	10	53	18	11			9	9	
196	50	03	145	53	24	07	68	15	00	4221	08	61	16	11			9	9	
197	49	59	144	55	24	07	68	18	00	4221	08	61	16	11			9	9	
198	50	01	144	51	24	07	68	21	00	4221	09	10	15	11			8	8	
199	50	02	144	48	25	07	68	00	00	4221	09	61	13	11			8	8	
200	50	07	144	46	25	07	68	03	00	4221	09	10	04	11			7	8	
201	50	00	144	58	25	07	68	06	00	4221	08	02	02	11			7	8	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
202	49	58	144	57	25	07	68	09	00	4221	09	02	04	11			6	8	
203	50	03	144	54	25	07	68	12	00	4221	09	02	04	11			5	8	
204	50	01	144	53	25	07	68	15	00	4221	10	02	06	11			5	8	
205	50	02	144	51	25	07	68	18	00	4221	11	02	10	11			6	8	
206	50	06	144	45	25	07	68	21	00	4221	11	02	13	11			6	8	
207	50	03	144	55	26	07	68	00	00	4221	12	02	13	11			6	8	
208	50	05	144	59	26	07	68	03	00	4221	12	02	14	11			6	8	
209	50	02	145	00	26	07	68	06	00	4221	13	02	14	11			6	8	
210	50	03	144	55	26	07	68	09	00	4221	13	02	18	11			6	8	
211	50	03	144	53	26	07	68	12	00	4221	14	02	14	11			6	8	
212	50	07	144	58	26	07	68	15	00	4221	13	02	17	11			6	8	
213	49	57	145	01	26	07	68	18	00	4221	14	02	18	11			6	8	
214	50	00	144	58	26	07	68	21	00	4221	14	02	18	11			5	8	
215	50	06	145	00	27	07	68	00	00	4221	13	02	16	11			6	8	
216	50	03	144	58	27	07	68	03	00	4221	13	81	23	22			8	8	
217	50	00	145	02	27	07	68	06	00	4221	13	61	23	22			8	8	
218	49	55	145	00	27	07	68	12	00	4221	12	61	23	22			8	8	
219	50	12	144	57	27	07	68	15	00	4221	12	21	26	22			8	8	
220	49	56	145	00	27	07	68	18	00	4221	13	02	21	22			6	8	
221	50	00	145	00	27	07	68	21	00	4221	15	02	20	11			6	8	
222	50	03	145	02	28	07	68	00	00	4221	16	02	19	11			6	8	
223	50	07	145	00	28	07	68	03	00	4221	17	02	14	22			6	8	
224	50	00	145	00	28	07	68	06	00	4221	18	02	14	22			6	8	
225	50	02	144	58	28	07	68	09	00	4221	20	02	11	32			6	8	
226	50	01	145	03	28	07	68	12	00	4221	21	02	13	22			6	8	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
227	50	08	145	03	28	07	68	15	00	4221	21	02	11	22			6	8	
228	50	00	145	00	28	07	68	18	00	4221	22	02	10	22			6	8	
229	50	01	145	00	28	07	68	21	00	4221	23	02	10	11			6	8	
230	50	06	145	01	29	07	68	00	00	4221	23	02	14	11			6	8	
231	50	07	145	05	29	07	68	03	00	4221	22	47	22	11			9	9	
232	49	59	145	01	29	07	68	06	00	4221	21	45	18	11			9	9	
233	50	02	145	02	29	07	68	09	00	4221	22	43	15	11			9	9	
234	50	01	145	05	29	07	68	12	00	4221	22	51	17	11			9	9	
235	50	04	145	07	29	07	68	15	00	4221	23	45	13	11			9	9	
236	49	57	145	03	29	07	68	18	00	4221	23	61	17	11			9	9	
237	50	03	145	06	29	07	68	21	00	4221	24	43	16	11			9	9	
238	50	05	145	06	30	07	68	00	00	4221	25	21	11	11			6	3	
239	50	07	145	03	30	07	68	03	00	4221	25	21	15	11			6	8	
240	50	01	144	57	30	07	68	06	00	4221	26	20	15	11			9	9	
241	50	03	144	57	30	07	68	09	00	4221	26	22	16	11			6	8	
242	50	10	145	00	30	07	68	12	00	4221	26	22	17	11			6	8	
243	50	13	145	01	30	07	68	15	00	4221	26	22	12	11			9	9	
244	50	03	145	00	30	07	68	18	00	4221	27	23	12	11			9	9	
245	50	01	144	58	30	07	68	21	00	4221	28	23	10	11			9	9	
246	50	03	144	56	31	07	68	00	00	4221	27	28	10	11			6	8	
247	50	07	144	55	31	07	68	03	00	4221	27	02	07	11			6	8	
248	49	57	144	54	31	07	68	06	00	4221	27	02	10	11			5	8	
249	50	02	144	53	31	07	68	09	00	4221	25	02	16	11			6	8	
250	50	05	145	00	31	07	68	12	00	4221	25	20	17	11			6	8	
251	50	05	144	55	31	07	68	15	00	4221	24	45	12	11			9	9	

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
252	50	01	144	59	31	07	68	18	00	4221	24	51	15	11			6	8	
253	50	05	144	55	31	07	68	21	00	4221	25	45	12	11			9	9	
254	50	09	144	53	01	08	68	00	00	4221	25	02	14	11			6	8	
255	50	00	145	01	01	08	68	03	00	4221	25	10	17	11			6	8	
256	50	02	144	58	01	08	68	06	00	4221	25	02	15	11			6	8	
257	50	04	144	57	01	08	68	09	00	4221	26	51	12	11			6	8	
258	50	01	144	59	01	08	68	12	00	4221	27	20	13	11			6	8	
259	50	04	144	58	01	08	68	15	00	4221	27	51	10	11			6	7	
260	50	02	144	58	01	08	68	18	00	4221	28	02	06	11			6	7	
261	49	58	144	58	01	08	68	21	00	4221	28	02	04	11			6	6	
262	49	57	144	57	02	08	68	00	00	4221	28	02	04	00			6	8	
263	49	57	144	55	02	05	68	03	00	4221	27	02	03	00			6	8	
264	49	55	144	52	02	08	68	06	00	4221	28	02	00	00			6	8	
265	49	53	144	50	02	08	68	09	00	4221	28	02	00	00	11	6	8		
266	50	00	144	54	02	08	68	12	00	4221	27	20	00	00	11	6	8		
267	50	01	144	56	02	08	68	15	00	4221	28	51	03	00	11	6	8		
268	50	00	144	55	02	08	68	18	00	4221	28	20	04	00	11	6	7		
269	49	59	144	53	02	08	68	21	00	4221	28	02	05	00	11	6	8		
270	49	59	144	52	03	08	68	00	00	4221	28	02	08	00	11	5	7		
271	50	03	144	48	03	08	68	03	00	4221	27	02	07	00	11	5	8		
272	50	01	144	52	03	08	68	06	00	4221	27	45	06	00	11	5	9		
273	50	02	144	58	03	08	68	09	00	4221	28	51	09	00	11	5	8		
274	49	58	144	58	03	08	68	12	00	4221	28	20	12	00	11	5	8		
275	49	59	144	55	03	08	68	15	00	4221	29	02	10	00	11	5	6		
276	49	51	144	52	03	08	68	18	00	4221	29	45	06	00	11	5	9		

TABLE 2

CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
277	49	47	144	46	03	08	68	21	00	4221	30	02	07	00	11	5	8		
278	49	54	145	00	04	08	68	00	00	4221	31	02	08	00	11	5	8		
279	49	57	145	00	04	05	68	03	00	4221	30	02	07	00	11	5	6		
280	49	58	144	58	04	08	68	06	00	4221	31	51	08	00	11	6	8		
281	49	58	144	53	04	08	68	09	00	4221	31	02	07	00	11	6	8		
282	49	56	144	52	04	08	68	12	00	4221	31	02	12	00	11	6	8		
283	49	50	144	50	04	08	68	15	00	4221	31	02	10	00	11	6	8		
284	49	59	145	01	04	08	68	18	00	4221	31	02	08	00	11	6	6		
285	49	57	145	00	04	08	68	21	00	4221	31	02	08	00	11	6	8		
286	49	52	145	02	05	08	68	00	00	4221	31	02	13	00	11	6	8		
287	49	55	144	55	05	08	68	15	00	4221	29	02	06	00	11	6	8		
288	50	01	144	58	05	08	68	18	00	4221	29	02	06	00	11	6	8		
289	49	58	144	56	05	08	68	21	00	4221	29	02	06	00	11	6	8		
290	49	57	144	54	06	08	68	00	00	4221	27	02	10	00	11	6	8		
291	49	56	144	53	06	08	68	03	00	4221	27	02	07	00	11	6	8		
292	49	59	144	58	06	08	68	06	00	4221	26	02	11	00	11	6	8		
293	50	00	144	56	06	08	68	09	00	4221	26	02	10	00	11	6	8		
294	50	02	144	54	06	08	68	12	00	4221	26	02	12	00	11	6	8		
295	50	00	144	55	06	08	68	15	00	4221	25	02	15	00	11	6	8		
296	50	00	145	00	06	08	68	18	00	4221	24	51	13	00	11	6	8		
297	50	01	145	01	06	08	68	21	00	4221	23	02	12	00	11	6	7		
298	49	54	145	04	07	08	68	00	00	4221	24	02	09	00	11	6	7		
299	49	53	145	03	27	08	68	03	00	4221	24	80	06	00	11	6	8		
300	49	58	145	02	07	08	68	06	00	4221	24	02	04	00	11	6	8		
301	49	59	145	00	07	08	68	09	00	4221	25	02	06	00	11	6	8		

TABLE 2

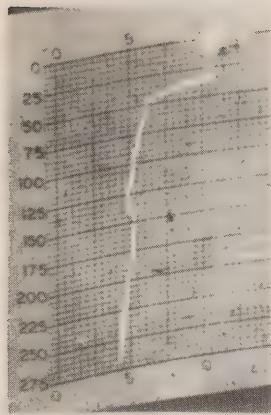
CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
302	50	00	145	00	07	08	68	12	00	4221	26	01	02	00	11	6	5		
303	49	55	145	03	07	08	68	15	00	4221	26	51	00	00	11	6	8		
304	49	59	145	00	07	08	68	18	00	4221	26	02	00	00	11	6	6		
305	49	57	145	02	07	08	68	21	00	4221	27	02	02	00	11	6	6		
306	49	56	145	00	08	08	68	00	00	4221	27	02	05	00	11	6	8		
307	49	54	145	00	08	08	68	03	00	4221	27	02	02	00	11	4	8		
308	49	54	145	00	08	08	68	06	00	4221	27	02	04	00	11	4	7		
309	49	57	145	00	08	08	68	09	00	4221	27	02	00	00	11	4	8		
310	49	52	145	02	08	08	68	12	00	4221	27	02	08	00	11	4	8		
311	49	57	145	04	09	08	68	15	00	4221	27	02	04	00	11	4	7		
312	49	56	145	06	08	08	68	18	00	4221	26	02	10	00	11	4	3		
313	49	58	145	07	08	08	68	21	00	4221	27	02	10	00	11	5	7		
314	49	59	145	12	09	08	68	00	00	4221	26	02	12	00	11	5	8		
315	49	57	145	13	09	08	68	03	00	4221	25	02	10	11	11	7	7		
316	49	53	145	14	09	08	68	06	00	4221	25	02	10	11	11	7	7		
317	49	58	145	15	09	08	68	09	00	4221	25	02	10	11	11	7	8		
318	50	03	145	05	09	08	68	12	00	4221	24	02	10	11	11	7	7		
319	49	58	145	04	09	08	68	15	00	4221	24	02	13	11	11	6	6		
320	50	03	145	01	09	08	68	18	00	4221	23	02	14	11	11	6	6		
321	50	04	145	06	09	08	68	21	00	4221	23	02	16	11	11	6	8		
322	50	04	145	10	10	08	68	00	00	4221	22	02	17	22	22	6	7		
323	50	06	145	07	10	08	68	03	00	4221	20	02	18	22	22	6	7		
324	50	04	145	07	10	08	68	06	00	4221	20	02	22	32	22	6	7		
325	50	00	145	04	10	08	68	09	00	4221	19	02	20	32	22	7	8		
326	50	07	145	00	10	08	68	12	00	4221	17	61	24	32	33	7	8		

TABLE 2

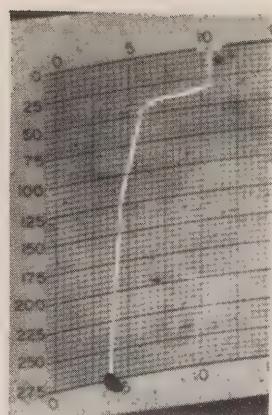
CON No	LAT		LONG		DATE			GMT		DEPTH Metres	BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min					P	H	P	H	T	A
327	50	02	144	55	11	08	68	00	00	4221	12	45	16	22	22	7	9		
328	50	07	144	50	11	08	68	03	00	4221	12	02	10	22	22	6	8		
329	50	04	144	54	11	08	68	06	00	4221	13	02	16	22	22	6	8		
330	50	00	144	54	11	08	68	09	00	4221	13	02	12	22	22	6	8		
331	50	00	144	50	11	08	68	12	00	4221	13	02	11	11	22	6	8		
332	50	08	144	50	11	08	68	15	00	4221	14	02	11	11	11	6	8		
333	50	07	144	48	11	08	68	18	00	4221	14	02	04	00	11	5	8		
334	50	09	144	45	11	08	68	21	00	4221	14	61	04	00	11	5	8		
335	50	01	144	48	12	08	68	00	00	4221	13	02	00	00	11	6	8		
336	50	02	142	42	12	08	68	06	00	3910	14	02	03	00	11	6	8		
337	49	45	141	40	12	08	68	11	15	3970	14	02	08	00	11	6	8		
338	49	52	140	39	12	08	68	14	30	3881	14	02	12	00	11	6	8		
340	49	38	139	40	12	08	68	18	00	3840	13	01	08	12	12	8	7		
341	49	33	138	40	12	08	68	21	20	3890	13	02	00	X0	51	8	6		
342	49	30	137	40	13	08	68	00	25	3850	13	02	05	X0	51	8	5		
343	49	30	136	42	13	08	68	03	50	3775	12	02	08	11	11	6	3		
344	49	22	135	40	13	08	68	07	20	3200	13	02	12	11	11	6	3		
345	49	18	134	40	13	08	68	10	45	3550	13	02	12	11	11	6	3		
346	49	13	133	40	13	08	68	14	00	3200	13	02	08	11	11	6	2		
347	49	09	132	40	13	08	68	17	20	3275	14	02	12	11	11	6	2		
348	49	04	131	40	13	08	68	21	00	2875	14	02	14	21		8	3		
349	49	00	130	40	14	08	68	00	05	2930	14	02	15	22	11	6	3		
350	48	56	129	40	14	08	68	03	30	2601	13	02	18	22	11	6	4		
351	48	51	128	40	14	08	68	07	12	2529	13	02	10	22	11	6	4		
352	48	46	127	40	14	08	68	11	00	2500	11	02	20			6	4		

TABLE 2

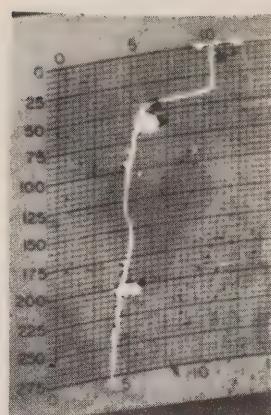
CON No	LAT		LONG		DATE			GMT		DEPTH		BAR Mbs	WW Code	WIND Amt	W-1		W-2		CLOUD	
	Deg	Min	Deg	Min	Day	Mon	Yr	Hrs	Min	Metres					P	H	P	H	T	A
353	48	42	126	40	14	08	68	14	00	1300	09	02	22	33	22	6	2			
354	48	38	126	00	14	08	68	17	00	0110	10	02	12	33	22	6	2			
355	48	33	125	32	14	08	68	18	45	0128	10	02	05	22	22	6	2			



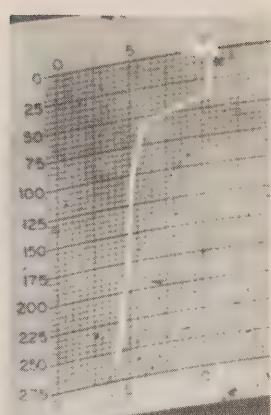
65



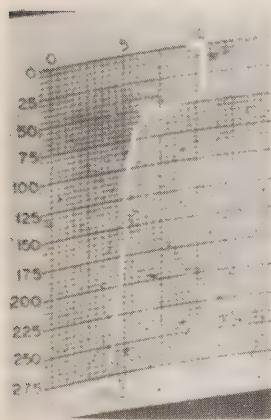
66



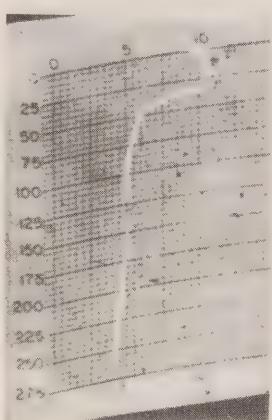
67



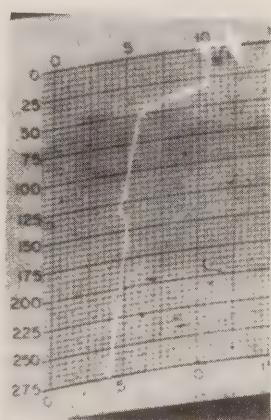
68



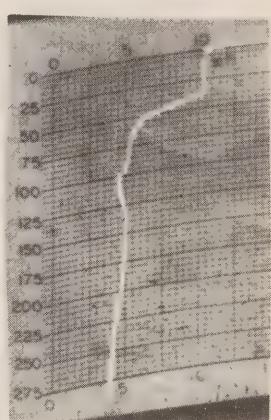
69



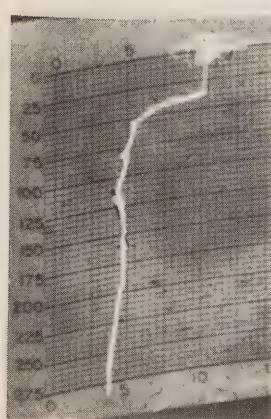
70



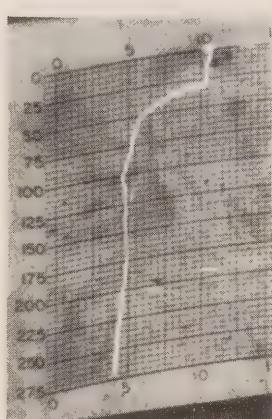
71



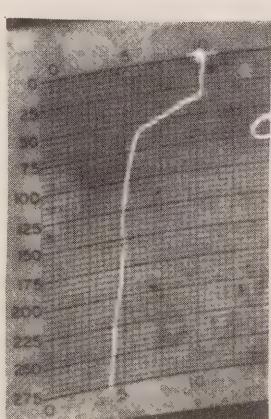
72



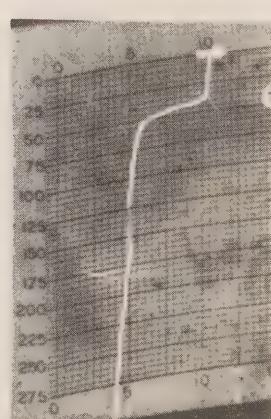
73



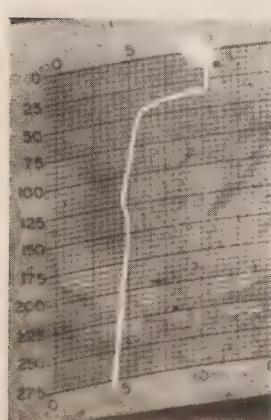
74



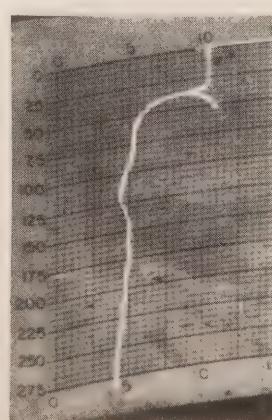
75



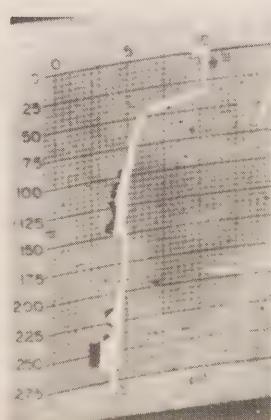
76



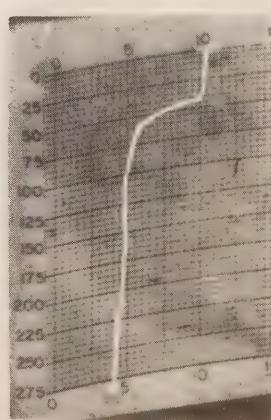
77



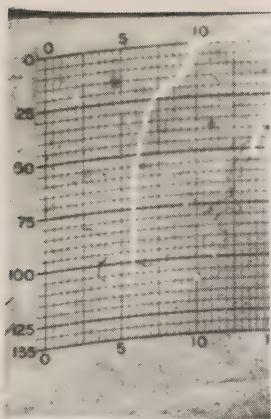
78



79



80



355

SECTION V

Surface Salinity Data

P-68-2

Surface salinity observations

CCGS "VANCOUVER"

Date-Time GMT	Position		Salinity S %
	Latitude	Longitude	
68-05-18-02.5	48°33'	125°32' W	31.582
18-04.4	48°38'	126°00'	31.712
18-07.1	48°42'	126°40'	30.999
18-11.0	48°46'	127°40'	32.253
18-15.0	48°51'	128°40'	32.033
18-18.0	48°50'	129°40'	32.299
18-21.2	49°02'	130°40'	31.920
19-00.8	49°05'	131°40'	32.518
19-03.0	49°10'	132°40'	32.516
19-07.0	49°15'	133°40'	32.541
19-09.0	49°17'	134°40'	32.543
19-12.8	49°23'	135°40'	32.536
19-15.6	49°26'	136°40'	32.546
19-20.2	49°30'	137°40'	32.554
19-23.6	49°34'	138°40'	32.556
20-03.0	49°38'	139°40'	32.569
20-06.2	49°41'	140°40'	32.549
20-11.6	49°40'	141°40'	32.529
20-15.0	49°49'	142°40'	32.540
20-20.1	49°54'	143°40'	32.566
22-00.0	49°59'	144°59'	32.533
24-00.0	50°03'	145°05'	32.577
25-00.0	50°02'	144°59'	32.556
26-00.0	49°58'	145°04'	32.541
27-00.0	50°02'	144°58'	32.575
28-00.0	50°02'	145°01'	32.558
29-00.0	50°03'	145°05'	32.558
30-00.4	49°59'	145°00'	32.543
31-00.0	50°01'	144°59'	32.508
68-06-01-00.0	49°58'	144°43'	32.564
02-00.9	50°00'	145°08'	32.554
03-00.5	49°58'	145°01'	32.546
04-00.0	50°04'	144°58'	32.532
05-00.0	50°01'	144°58'	32.538
06-00.0	50°03'	144°57'	32.549
07-00.0	49°58'	144°59'	32.539
08-00.0	50°00'	145°05'	32.538
09-00.0	50°01'	144°53'	32.527
10-00.0	49°58'	145°06'	32.545
11-00.0	48°57'	145°00'	32.563
12-00.0	49°57'	144°56'	32.549
14-00.0	49°59'	144°56'	32.572
15-00.0	49°57'	144°51'	32.524

Continued . . .

P-68-2 (continued)

Date-Time GMT	Position		Salinity S ‰
	Latitude	Longitude	
68-06-16-00.0	49°55' N	145°02' W	32.524
17-00.0	49°55'	145°03'	32.536
18-00.0	49°59'	145°00'	32.550
19-00.0	50°00'	145°00'	32.526
20-00.0	50°01'	144°58'	32.536
21-00.0	50°04'	144°58'	32.532
22-00.0	49°58'	145°03'	32.550
23-00.0	49°59'	145°05'	32.557
24-00.0	49°57'	145°07'	32.507
25-00.0	50°03'	145°00'	32.593
26-00.0	49°54'	145°02'	32.507
27-00.0	49°55'	145°04'	32.536
28-00.0	50°06'	145°05'	32.554
29-00.0	49°57'	144°56'	32.540
30-00.0	50°04'	144°57'	32.460
68-07-01-15.0	49°38'	139°40'	32.484
01-22.9	49°30'	137°40'	32.444
01-18.0	49°40'	138°40'	32.613
02-02.0	49°26'	136°40'	--
02-07.0	49°23'	135°40'	--
02-09.9	49°17'	134°40'	--
02-13.2	49°15'	133°40'	32.406
02-16.0	49°10'	132°40'	--
02-19.0	49°05'	131°40'	--
02-23.0	49°02'	130°40'	--
03-02.6	48°55'	129°40'	32.300
03-05.1	48°51'	128°40'	--
03-09.8	48°46'	127°40'	31.885
03-12.0	48°42'	126°40'	31.593
03-13.5	48°38'	126°00'	31.453

Patrol #4

Surface salinity observations

CCGS "QUADRA"

Date-Time GMT	Position		Salinity S %
	Latitude	Longitude	
68-06-28-22.4	48°33'	N 125°32' W	31.142
29-00.0	48°48'	126°00'	31.561
29-15.0	49°00'	130°00'	32.154
29-18.5	49°05'	131°40'	32.492
29-21.8	49°09'	132°40'	32.338
30-01.7	49°15'	133°40'	32.488
30-04.0	49°18'	134°40'	32.521
30-07.0	49°22'	135°40'	32.504
30-10.5	49°26'	136°40'	32.460
30-14.0	49°30'	137°40'	32.493
30-16.0	49°35'	138°40'	32.509
30-20.7	49°38'	139°40'	32.478
68-07-01-00.0	49°42'	140°40'	32.360
01-03.0	49°45'	141°40'	32.459
02-15.0	49°49'	142°40'	32.417
03-00.0	49°58'	145°04'	32.553
04-00.0	Station P		32.410
05-00.0			32.658
06-00.0			32.549
07-00.0			--
08-00.0			--
09-00.0			32.460
10-00.0			32.443
11-00.0			32.487
12-00.0			32.481
13-00.0			32.470
14-00.0			32.465
15-00.0			32.515
16-00.0			32.462
17-00.0			32.471
18-00.0			32.469
19-00.0			32.469
20-00.0			32.470
21-00.0			32.471
22-00.0			32.411
23-00.0			32.432
24-00.0			32.416
25-00.0			32.453
26-00.0			32.434
27-00.0			32.416
28-00.0			32.424
29-00.0			32.467
30-00.0			32.435

Patrol #4 (continued)

Date-Time GMT	Position		Salinity S %
	Latitude	Longitude	
68-07-31-00.0		Station P	32.416
68-08-01-00.0			32.404
02-00.0			32.301
03-00.0			32.420
04-00.0			32.432
05-00.0			32.511
06-00.0			32.432
07-00.0			32.433
08-00.0			32.501
09-00.0			32.487
10-00.0			32.447
11-00.0			32.319
12-00.0			32.413
12-11.2	49°45'	141°40'	32.351
12-14.5	49°42'	140°39'	32.352
12-18.0	49°38'	139°40'	32.378
12-21.3	49°33'	138°40'	32.359
13-00.4	49°30'	137°40'	32.385
13-03.8	49°30'	136°42'	32.404
13-07.3	49°22'	135°40'	32.468
13-10.7	49°18'	134°40'	32.414
13-14.0	49°13'	133°40'	32.414
13-17.3	49°09'	132°40'	32.421
13-21.0	49°04'	131°40'	32.353
14-00.1	49°00'	130°40'	32.298
14-03.5	48°56'	129°40'	32.249
14-07.2	48°51'	128°40'	31.759
14-11.0	48°46'	127°40'	31.884
14-14.0	48°42'	126°40'	31.995
14-17.0	48°38'	126°00'	31.378
14-18.7	48°33'	125°32'	31.919

REFERENCES

Atlantic Oceanographic Group, MS, 1961

Brown, N.L., and B.V. Hamon, 1961

Canadian Oceanographic Data Centre, 1969

Ekman, V.W.

Giovando, L.F., MS, 1962

Knudsen, Martin, 1901

Rattray, M. Jr., 1962

Sauer, C.D., and N.P. Fofonoff

Sauer, Charles D., 1964

Strickland, J.D.H., 1958

Strickland, J.D.H., 1960

Strickland, J.D.H., and T.R. Parsons, 1965

Wilson, W.D., 1960

Canadian Oceanographic Research Ships, 1961. Fish. Res. Bd. Canada, MS Rept. Oceanogr. and Limnol., No. 90, 36 pp.

An Inductive Salinometer. Deep-Sea Research, Vol. 8, No. 1, pp. 65-75.

Ocean Weather Station "P" - North Pacific Ocean. No. 10, 1969 Data Record Series.

Die Zusammendrückbarkeit des Meerwassers nebst einigen Werten Für Wasser und Quecksilber. Publ. Circ. Cons. Explor. Mer., No. 43, 47 pp.

The OCEAN System of Assessment of Bathythermograms. Fish. Res. Bd. Canada, MS Rept. Oceanogr. and Limnol., No. 105, 58 pp.

Hydrographischen Tabellen. Copenhagen 63 pp.

Interpolation Errors and Oceanographic Sampling, Deep-Sea Research. Vol. 9, pp. 25-37

Oceans II, a Computer Program for Processing Oceanographic Data (Unpublished).

Bathythermograph Data on Aperture Cards; A New Approach to an old Problem. J. Fish. Res. Bd. Canada, 21(3): 647-650.

Standard Methods of Seawater Analyses. Volume II. Fish. Res. Bd. Canada, MS Rept. Oceanogr. and Limnol., No. 19, 78 pp.

Measuring the production of Marine Phytoplankton. Bull. Fish. Res. Bd. Canada, No. 122, 172 pp.

A Manual of Seawater Analysis. (Second Edition, revised). Bull. Fish. Res. Bd. Canada, No. 125, 185 pp.

Equation for the Speed of Sound in Seawater. Journ. Acoust. Soc., America 32 (10); p. 1357.

PRINTED PUBLICATIONS OF THE CANADIAN OCEANOGRAPHIC DATA CENTRE
 IN THE 1969 DATA RECORD SERIES

NO.	TITLE	CODC REFERENCE
1	Labrador and Irminger Seas	10-66-001
2	Grand Banks to the Azores and Scotian Shelf	10-66-002
3	Ocean Weather Station "P"	02-67-007 02-67-009
4	East Greenland, Denmark Strait and Irminger Sea	10-67-001
5	Cabot Strait (limited distribution)	10-66-003
6	Ocean Weather Station "P"	02-67-010 02-68-002
7	Davis Strait and Northern Labrador Sea	10-65-001
8	Gulf of St. Lawrence and Scotian Shelf (limited distribution)	10-67-007
9	Scotian Shelf (limited distribution)	10-68-017 10-68-003
10	Ocean Weather Station "P"	02-68-003 02-68-004
11	Gulf of St. Lawrence (limited distribution)	10-68-004

117421

